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AND THE ALLIED ARTS.  
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POPULAR  
DICTIONARY  
OF  
ARCHITECTURE  
AND  
THE ALLIED ARTS.

A WORK OF REFERENCE  
FOR THE ARCHITECT, BUILDER, SCULPTOR, DECORATIVE  
ARTIST, AND GENERAL STUDENT.

WITH  
NUMEROUS ILLUSTRATIONS FROM ALL STYLES OF ARCHITECTURE,  
FROM THE EGYPTIAN TO THE RENAISSANCE.

BY  
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ETC., ETC.

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TO

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ROYAL COMMISSIONER AND JUROR FOR ARCHITECTURE AT PARIS  
EXPOSITION, 1878;

AND

HONORARY MEMBER OF THE GLASGOW INSTITUTE OF ARCHITECTS;

THIS VOLUME IS INSCRIBED

(BY PERMISSION)

WITH FEELINGS OF GREAT RESPECT AND ESTEEM,

BY

THE AUTHORS.





DICTIONARY  
OF  
ARCHITECTURE  
AND  
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A

**AQUILA.** The Latin term, employed by certain writers, to designate the triangular surface of the pediment of a temple, enclosed by the horizontal and raking cornices.

The Greeks called this portion of their temples *Aetos*, either from its resemblance in form to the outline of an eagle, with its wings outspread laterally, or from the customary practice of placing representations of the bird on elevated parts of temples, especially those sacred to Jupiter (see *Aetos*); and it is most probable that the Romans adopted the idea from the Greeks, substituting the term derived from the Latin word, signifying an eagle.

The Romans also used the term **AQUILA** to designate the military standard surmounted by an eagle, and the name of the standard-bearer was *Aquilifer*. The eagle was usually of small dimensions, modelled with outspread wings, and formed of silver or bronze. Representations of the eagle standard are to be found in ancient sculptures.

During the middle ages, the term **AQUILA** was applied to a lectern constructed in the shape of an eagle, standing upon an ornamental pedestal, and with wings so disposed as to form a desk. (See *Eagle* and *Lectern*.)

**AQUILO.** (*Lat.*) In mythology, the God of the North-east Wind. He is represented, in the sculptures of the octagonal tower of Andronicus Cyrrhestes, or "Tower of the Winds," at Athens, as an aged man, with flowing hair and beard, and large wings, clad in a somewhat scanty garment, and wearing buskins on his feet. In his hands he carries what

is evidently a shield, with its inside or back presented to the observer; this is half filled with small egg-shaped objects which are most probably intended to represent hail-stones, although certain French authorities incline to the belief that they represent olives. It is somewhat difficult, however, to associate olives with the bleak and blighting north-east wind; they are as wide apart as oil and water.

The following description is given in Stuart and Revett's *Antiquities of Athens* :—

“*KAIKIAS* or *Cæcias*, the North-East Wind; is Cloudy, Wet and Cold; Snow, and at some Seasons, Hail and Tempest accompany this Wind. The figure which represents it, is an old Man with a severe Countenance; He holds with both his Hands a circular Shield, from whence he seems prepared to rattle down a storm of Hail; the inside of it is turned to the Spectators; the Handle in the middle of it, proves it to be a Shield.

“‘*Cæcias*,’ says Mons. Le Roy, ‘ou le Nord-Est, &c., est un Vieillard qui tient dans sa main un plat d’Olives qu’il renverse. Pour signifier peut-être que ce Vent est nuisible à ce Fruit.’

“Wheeler’s account of this Figure is thus rendered by his French Translator: ‘*Cæcias*, ou le Vent de Nord-Est, &c., est représenté comme un vieux Barbon, qui porte un plat d’Olives, qu’il renverse, &c., je croirois que ce vent est ainsi représenté parce qu’il est ennemi des Olives,’ &c.

“But it is incontestibly a Shield, and not a Dish which *Cæcias* holds, and it is much more probable, that the Contents are Hail Stones than Olives.”

Bell says :—“*Aquilo* is mentioned by the poets in the character of a person, as indeed are all the other winds. Ovid speaks of *Hiems* as trembling at the presence of *Aquilo*, or the North-East. There is an expression in Statius relating to the same personage, which may possibly have been borrowed from ancient figures, not unlike those blustering faces commonly represented in the corners of maps.”\*

**AQUIMANALE.** The water-vessel or ewer, with its basin, used by the ancient Romans for washing their hands after a banquet. It was generally made of the precious metals, and richly decorated.

**AQUIMINARIUM.** The name given by the ancient Romans to the vessel used for containing the lustral water. Numerous examples of this description of vase have been found at Herculaneum and elsewhere; from these it appears that the materials most commonly employed in its construction were bronze and marble. When of the former, it was sometimes beautifully wrought, and ornamented with applications of laurel leaves or other enrichments in the precious metals. The aquiminarium of marble was usually in the form of an open vase, about sixteen or eighteen inches in diameter, supported on a pedestal in the shape of a short fluted column.

**ARA.** The term applied, generally, by the Romans to small constructions, raised above the level of the ground in the form of altars, for the

\* Bell’s *New Pantheon*. London, 1790.



reception of offerings to the gods. The term *altare*, generally understood to be a contraction of *alta ara*, was probably confined to the more elevated and important constructions used for sacrifices.\* (See *Altar*.)

**ARAB ARCHITECTURE.** The term applied, generally, to those styles, chiefly based upon Byzantine and Sassanian architecture, developed under the Mahommedan Faith and by the fervid genius of the widely-spread Arab races.

The term might be appropriately confined to the highly characteristic architecture of Syria and Egypt, which obtained between the seventh and fifteenth centuries, and found its highest development in the mosques of Cairo—Ibn Touloun (A.D. 879), El Azhar (981), Sultan Berkook (1149), Sultan Hassan (1357), and El Kaithbay (1463). This style, although obviously based on the Christian architecture of the east, appears to be more immediately and purely Arab in its development than any of the other styles of Saracenic architecture.

We do not purpose giving a lengthy dissertation on it here, as we shall have to treat it under the head of *Saracenic Architecture*, in the present work; but we may give a few particulars relating to certain of the buildings, above mentioned, from the pen of an observant writer. †

“Fanaticism, fostered by an earnest piety, excited the Arabs in Egypt to found learned institutions and to construct monumental buildings. The mosques in Kairo or Musr, which became one of the greatest and most important cities during the tenth century, are totally different from those which were built in Spain. Constructive simplicity and earnestness, powerful masses, and a predominant use of mighty columns and solid square blocks, without any attempt to disguise the stone material, distinguish the Arab architecture in Egypt. In general, the mosques consisted of a square court-yard, surrounded by colonnades, in the midst of which stood the square, or polygonal, well under a cupola. One of the four sides was provided with a greater number of arcades forming the sanctuary. In older buildings, the colonnades rested on antique columns, whilst at a later period the use of pillars, ornamented at the corners with half-columns, became more general. According to this plan is the Mosque El Moyed, built in 1415, by Sultan Melek. It is an open square of 300 feet, surrounded on three sides by colonnades, and on the fourth, by a triple range of arches forming the three-aisled sanctuary, in shape like a basilica. The arches of the colonnades are pointed, have the horse-shoe form, and are supported by mighty square pillars; the round horse-shoe arches of the sanctuary rest on columns, most of which have Korinthian capitals collected from different ancient buildings indiscriminately, provided

\* ARA.—L'*ara* étoit distinguée d'*altare*; 1<sup>o</sup> *ara*, selon Servius, étoit un autel consacré également aux dieux supérieurs & à ceux des enfers: *altare* étoit consacré aux dieux supérieurs seuls; 2<sup>o</sup> *ara* étoit la table même de l'autel, sur laquelle on faisoit les libations, &c.; & *altare* étoit le corps de l'autel.—*Encyclopédie Méthodique*. Paris, 1786.

† G. G. Zerffi, in *The Building News*, January 16th, 1874.

with a low and plain plinth as a pedestal. The ceiling is of wood, ornamented with gaudy rosettes and arabesques, whilst the corners have a stalactite decoration. . . . Two minarets, each 187 feet high, rise by the side of the mosque, which may be considered one of the most elegant specimens of these mixed constructions, on account of the lightness of the proportions. The Mosque Ibn Tulun, built, according to the inscriptions in Kufic characters, in the ninth century, is in plan and general disposition of the details a square portico with a flat roof. Three sides have double colonnades, whilst the sanctuary is formed of a row of five arches, running from east to west. The arches are of the horse-shoe form, but sharply pointed. They rest on mighty, well proportioned, square pillars, decorated on the four corners with columns without bases, which have capitals partly projecting, and partly only marked, in no way interrupting the structural lines, as they nowhere extend beyond the flat outlines of the pillars.\* . . . In this mosque the influence of Egypt may be traced in the massive simplicity and imposing grandeur of the whole. In the mosques built at a later period, pointed and circular arches vary, as also the use of columns and pillars. . . . The decoration, which is most characteristic of the Arabs, and consists of thousands of different patterns, may be studied in the tracery of the parapet of the Mosque El Azhar (the splendid), built 981. The entwined straight lines form stars and hexagonal figures crowned with fantastically composed leaf-like 'crest stones.' The effect of this finishing wall decoration is charming. The most splendid of all the mosques at Kairo is that of Sultan Hassan (Melik-el-Nasry, founded 1356), of which Magryzy, an Arabian writer, says that no other building of the Moslems can be compared to it as regards height, grandeur, and beauty. The ground-plan differs altogether from the general arrangement of the mosques." (See *Mosque*.) "The square court-yard is much smaller, and is not surrounded by colonnades, but by flat walls 100 feet high, broken on each side by a gigantic pointed arch leading into vast halls, giving the whole the form of a cross. . . . At the back of the most important halls is the sanctuary, to which is attached the tomb of the founder, under a high dome, which rests on splendid stalactite pendentives. The interior of the court, with its simple walls, decorated with inscriptions from the Koran, in bright red, green, gold, and blue, produces a solemn impression, reminding us of the Egyptian skill in wielding mighty masses with dignity for an architectural purpose. Not less imposing are the outer walls, divided by perpendicular mouldings, and terminating in a powerful cornice, entirely in the old Egyptian spirit. Two minarets, 280 feet in height, flank the tomb on either side; they are elegant and beautiful, both in outline and design."

This writer does not allude to the mosque and tomb of Kaitbay, erected about the middle of the fifteenth century, yet this late and comparatively small building is perhaps the most beautiful and characteristic specimen of

\* An illustration is given in Fergusson's *Handbook of Architecture*.



Arab architecture in Egypt. Speaking of this structure, Mr. Fergusson remarks :—"Looked at externally or internally, nothing can exceed the grace of every part of this building. Its small dimensions exclude it from any claim to grandeur, nor does it pretend to the purity of the Greek and some other styles ; but as a perfect model of the elegance we generally associate with the architecture of this people, it is perhaps unrivalled by anything in Egypt, and far surpasses the Alhambra or the western buildings of its age.

For descriptions of the characteristic features and details of Arab architecture we must refer our readers to our general article, *Saracenic Architecture*.

**ARABESQUE.** The term commonly employed to designate a class of ornamentation which is purely fanciful, and whose component parts have no relation to one another, being disposed without rule or fitness, and, in the generality of cases, with a studied antagonism to natural laws.

This definition, though perfectly correct, as will be shortly shown, may at first appear one-sided, and as practically denying the existence of any true art-feeling in the ornamentation to which the term is applied ; we do not, however, desire the definition to be accepted in so broad and sweeping a manner, for, although a large proportion of such ornamentation is utterly meaningless and crude, there is some which the great refinement, fertile fancy, and executive skill of its originator have almost elevated into the realms of true art.

The term itself, however, is incorrect, for it implies that the peculiar class of ornamentation originated in Arab art. Such is not the case ; arabesques, or such ornaments as group themselves under that name, were used by the Egyptians, Assyrians, Greeks, Etruscans, and the Romans.\*

\* "Although the Arabians may have been the restorers, or modern inventors of this species of decoration, yet it certainly had its origin in very ancient times. Some writers find its origin in those leaves and flowers with which the Egyptians, and even the Greeks, decorated their edifices, and which were used as borders to many of the antique vases ; but the resemblance is too slight to stamp much credit on the conjecture. A more rational idea is, that the arabesque ornaments were suggested to the Greeks by the oriental tapestries, which they much admired, on which were wrought the most fantastical compositions of plants, animals, &c., and which probably gave rise to many of the fabulous animals of poetry ; such as centaurs, griffins, chimera, &c. The Greeks named these cloths *Zodia*, from the animals they contained. It is not possible to say now whether the Greeks first employed this species of ornament in painting to decorate panels, vases, &c., in the interior of their apartments ; or in sculpture for the exterior : how far the fact may direct us of the Temple of Apollo Didymæus, near to Miletus, in Ionia, erected during the best time of Grecian art, which had its frieze ornamented with foliage and griffins, and its pilasters with ornaments similar to those called arabesque, and which had genii springing from the foliage of the acanthus, is difficult to ascertain. This species of ornament was not known in Rome till near the time of Augustus, when, it is probable, they were introduced from Alexandria ; for Vitruvius, who lived at this period, speaks of them with the expression *audacia Ægyptiorum in pictura*, as novel introductions into Rome. The Romans loved the arts, from the opportunities they afforded them of displaying their riches, and of gratifying their love for splendour and magnificence. This disposition introduced by degrees a greater latitude in their composition, and which became

The few examples preserved to us of Egyptian, Assyrian, and Greek origin clearly indicate that whimsical imagination had little part in their composition; but in the Etruscan, and more especially in the Roman, considerably more freedom and fancy are to be observed. Speaking of the Roman arabesques of his day, Vitruvius says:—"But those (paintings on walls) which were used by the ancients are now tastelessly laid aside; inasmuch as monsters are painted in the present day rather than objects whose prototypes are to be observed in nature. For columns reeds are substituted; for pediments the stalks, leaves, and tendrils of plants; candelabra are made to support the representations of small buildings, from whose summits many stalks appear to spring with absurd figures thereon. Not less so are those stalks with figures rising from them, some with human heads, and others with the heads of beasts; because similar forms never did, do, nor can exist in nature. These new fashions have so much prevailed that for want of competent judges, true art is little esteemed. How is it possible for a reed to support a roof, or a candelabrum to bear a house with ornaments on its roof, or a small and pliant stalk to carry a sitting figure; or, that half figures and flowers at the same time should spring out of roots and stalks? And yet the public, so far from discouraging these falsehoods, are delighted with them, not for a moment considering whether such things could exist. Hence the minds of the multitude, misled by improper judges, do not discern that which is founded on reason and the rules of propriety. No pictures should be tolerated but those established on the basis of truth; and although admirably painted, they should be immediately discarded, if they transgress the rules of propriety and perspicuity as respects the subject."

The strictures of Vitruvius on the arabesques of his day are severe enough to satisfy the most ardent admirer of truth in art; and it can readily be understood that to him such fantastic conceptions must have appeared altogether meaningless, and bizarre in the extreme. Pliny also joins him in severe comments. Notwithstanding such opposition, the luxurious disposition of the Romans favoured the adoption of this mode of decoration, which was at once gorgeous and sensuous; and it was accordingly largely used for the adornment of the dwellings of the wealthy, palaces, and public buildings. The most important examples of Roman arabesques which have been preserved to modern times are those which adorned the baths of Titus; and it was from these that Raffaele derived the inspiration which led him to bestow so much attention to this phase of decorative art. He was unquestionably the Prince of Arabesque, for his

more and more costly in their materials, and varied in their designs; such as the most showy flowers and beautiful foliages, delicately and agreeably entwined, and figures springing from the calices of flowers. The ornaments upon many antique Greek vases, upon the walls of Herculaneum, the ruins of the baths of Titus at Rome, Hadrian's villa at Tivoli, the palace of Diocletian, the edifices of Pompeii, and others, are among the most elegant ancient examples of this species of decoration. In spite of the censures of Vitruvius and Pliny, arabesques not only prevailed but increased in Rome down to the last edifices of the lower ages."—*Elmes' Dictionary of the Fine Arts*. London, 1826.



genius imparted so great a charm to his compositions that their discordant features became linked together like the notes of a weird melody, and their allegories raised their expression almost to the dignity of poetry. Of the several details most frequently introduced by Raffaele, in the arabesques of the Loggia of the Vatican, we shall speak later on.

The arabesques found on the walls of the buildings of Pompeii are, for the most part, elegant and pleasing, and bear witness to great skill in free-hand drawing. They are, of course, capricious and fanciful, although they hardly reach the gross absurdities which so often arrest attention and deserve censure (from an art point of view) in some works of the Renaissance and later schools. Speaking of the Pompeian style, Owen Jones remarks:—"It owes its greatest charm to the light, sketchy, free-hand manner of its execution, which it is quite impossible to render in any drawing; and which has never been accomplished in any restoration of the style. The reason is obvious: the artists of Pompeii invented as they drew; every touch of their brush had an intention which no copyist can seize."\* Be this as it may, there is unquestionably no description of ornament which so much favours free-hand drawing and extempore designing as the arabesque founded upon the Roman and Pompeian schools. It imposes no trammels, requires no uniformity or connexion, is subservient to no rule, and appeals to no reason. The result may appear as a capricious trifle, a whim of the artist, a dream with a touch of poetry in it, or the serious record of a diseased imagination. The spaces to be decorated, in size or form, offer no impediments, its vagaries readily extend in any direction, filling up, as with an expression of wild freedom, the most awkwardly-shaped recesses, curves, and corners. "Sufficient unto the day is the evil thereof," may be accepted as the artist's text—a space in any portion of his design which may to-day tax his ingenuity may to-morrow be filled up with a graceful festoon of flowers, a naked figure, a hideous scaly monster, a group of musical instruments, a knot of fluttering ribbons, a trophy of arms, a pair of turtle doves, a temple façade, a landscape, a vase in imitation of some rarity in marble or bronze, a grinning mask, a smiling cupid, or the emblems of mortality; all are equally appropriate whatever the rest of his design may be.

Of the arabesques found in early Christian art little need be said; they closely resemble, as is to be expected, those which adorned the buildings of pagan Rome. Speaking of the paintings in the catacombs, F. Kugler remarks:—"The walls of these recesses are ornamented with subjects; the roofs still more richly so. Light arabesques, which, in spite of all rudeness of execution, remind us of the paintings at Pompeii and in the Baths of Titus, are distributed in a series of compartments round a centre

\* For illustrations of Pompeian arabesques we may refer the student to the standard work:—*Les plus beaux ornements et des tableaux les plus remarquables de Pompéi et d'Herculanum, &c.*, par Guillaume Zahn. Berlin, 1828. Both Owen Jones, in his *Grammar of Ornament*, and Racinet, in *L'Ornement Polychrome*, have reproduced certain arabesques from Zahn's work.

picture." \* A favourable example exists in the catacomb of St. Calixtus, consisting of twining vines, bearing fruit, with genii amidst the branches gathering the clusters, and birds perched around them.

In Byzantine decorative art we may observe a lingering feeling for the Roman arabesques; but their adoption was checked by the desire, on the part of the Christian artists, to represent figures of prophets, apostles, and saints, and scenes from Scripture history, in preference to merely ornamental forms. In some Byzantine manuscripts, however, many beautiful arabesques are to be found, displaying considerable originality and skill in their designs. They are more connected and flowing in their treatment than the more familiar styles of arabesque ornamentation. In the western schools of Christian art, anterior to the Renaissance, arabesques may be said to have no true existence: elegant flowing scrollwork of both conventional and natural forms were very commonly used in sculpture, stained glass, metal-work, painting, and illumination, but one can hardly include these within the strict meaning of the term arabesque.

In point of time, we have now arrived at those schools or styles of decorative art from which the term under consideration has been derived. The Arabs, forbidden by their Faith to represent anything endowed with life, and yet passionately fond of ornament and colour, were naturally thrown upon their own inventive faculties to supply that which would satisfy their requirements and gratify their love for the beautiful. It is well known how wonderfully successful they were in inventing a class of surface ornamentation, perfectly original in form and disposition, and capable of endless variety. (For illustrations of this ornamentation, see articles *Alhambresque*, *Arab Ornament*, and *Moresque*.) It is to be regretted that the term Arabesque has not been confined to the mode of ornamentation introduced by the Arabs, in the same manner as *Moresque* is exclusively applied to that single branch presented by the works of the Moors in Spain; and the force and definiteness of the word is much reduced by its vagueness and comprehensiveness. A term which, on the one hand, designates a refined, severe, and purely conventional class of ornamentation, where no animal or natural vegetable form appears, and which admits of infinite repetition over a surface; and, on the other hand, includes a class in every way diametrically opposed, where every detail is relaxed and sensuous, in which human figures, animals, monsters, fruit, flowers, and inanimate objects, are piled heterogeneously, in defiance of all rule or natural law, for the purpose of decorating a given space—can scarcely be considered apposite. To the former the term may readily be confined; for the latter description of ornament the most appropriate term would be *Grotesque*. (For remarks on the arabesques of the Arabs, see *Arab Ornament*.)

We now come to the period of the Renaissance; and first in importance

\* *Handbook of Painting*. Translated, from the German of Kugler, by a lady; edited by Sir C. L. Eastlake, F.R.S. London, 1867.



and merit are the works of Raffaele, the greatest of arabesque painters, the man who, by his skill and genius, has done more, perhaps, to elevate that branch of decoration towards the realms of true art than any one who has lived, and from whose works all the succeeding artists of the Renaissance derived their best motives and ideas.

In a limited work like the present it is quite impossible to give more than the faintest outline of Raffaele's school, and it is equally impossible without the aid of colour to illustrate, in a suitable manner, any of his arabesques. Hittorff gives so admirable a dissertation on the rise and progress of this school, and so ably draws comparison between its works and those of the ancients, that we cannot resist assisting the student to form a clear idea of the subject under review by quoting it here :—

“ It is a task of some difficulty to institute a comparison between the arabesques of the ancients and those of Raphael's time, because the paintings of that description, which have come down to us from antiquity, are neither the productions of a distinguished epoch of the arts, nor, strictly speaking, of similar application ; at all events, not like works conceived by the mind of the greatest painter of later times, and carried out by masters only second to him, or produced by artists whose position was similar, and whose merit was in many respects equal.

“ Were we to consider the relative value of the modern arabesques, before the discovery of the baths of Titus had wrought its influence upon the creative mind of Raphael, and were we then to ask how far his analogous productions would have been held in estimation, in comparison with the antique type, we should, no doubt, have to concede a great preference to the latter. When, however, we find most distinguished talents appointed to decorate edifices dedicated to the noblest and grandest purposes, while the ancient decorations of that kind were done by mere handicraftsmen, and, in the specimens extant, were applied only to inferior buildings, there cannot be any doubt, that the arabesques of Raphael and of his ingenious pupils, considered with regard to their peculiar invention, their extent, and partly their execution, stand upon a higher level than the former, and may, in some instances, claim greater merit.

“ On looking for the most probable causes which may have favoured the origin of the ancient arabesques, while we study the surfaces of the rooms in the excavations of Pompeii, and endeavour to enter into the spirit of those productions, thrown, as it were, upon the walls by a playful fancy and an easy hand, we find, in the diverting and pleasing impression which they make upon us, that their first effect is to awaken corresponding sensations, and next, from the apparent extent of the smallest spaces, to widen the vista to the utmost stretch. Hence the necessity to make use of the amplest forms, and the most beautiful colours for men, animals, flowers, and fruits, and their combinations. Thus, the application of the inexhaustible productions of nature, together with those of art, called forth the most fanciful associations, producing an agreeable impression on the spectator's mind. Again, by keeping all the upper portions of each apartment in white, or some other light local tint, a perfect optical illusion of transparency was brought about, an effect greatly promoted by the many architectural forms painted upon these surfaces, and consisting of twisted and variously-shaped diminutive columns, trellices, &c., so multiplied, as to produce the illusion of perspective, by removing from before the eye the immediate boundaries of the space. . . .

“ In what we have said with regard to the principle of adaptation observable in these decorations, our object has been to modify the harsh judgment pronounced by Vitruvius and Pliny, and subsequently by so many other critics, on arabesques in the Pompeian style. Let it be remembered, that if it was desirable to produce an apparent extent of space and a wide range for the fancy, without exactly intending or

wishing to control the precise direction of the latter, it must surely have been allowable to make use of the readiest means, and what other kind of representation could have been better adapted thereto, than the variety of arabesques? They constituted, so to speak, the fairy-world, brought before the visual sense by means of colours, and which in later times was transferred into the literature of tales and romances. In both instances the bare truth would appear cold, monotonous, and dry; and when a vigorous mind seizes upon the treasures of nature, howsoever playfully commingled, and reproduces them with their characteristic qualities, provided it be done in select forms agreeably arranged, and in lively and harmonious colours, who could feel surprised that, despite the ire of the venerable Roman architect, and as he himself laments, 'every one who has seen these extravagances, far from denouncing them, is invariably pleased with them.'

This is a very able apology, and, after our own expressions on the subject of arabesques in general, we have much pleasure in here recording it. The author proceeds:—

"Before we return to the arabesques of Raphael and his school, we wish, in concluding our remarks upon their predecessors, to inquire into the remarkable fact, confirmatory of our views, how far the mind and practice of this immortal genius became influenced by the remains of antique decorations (of inferior merit) found in the baths of Titus. Having until then studied the paintings of the ancients only in marble statues, the faint and almost obliterated sketches of the wall-paintings of the baths gave him an idea of the art in a higher application, which his exquisite feeling partly evolved from it. . . . Without entering upon a thorough investigation of ornamental art, in order to ascertain its position before the paintings of the Loggia of the Vatican were called into existence, and, without detracting from the minor influence of those Greek embellishments derived from the Mosaics, and applied to cupolas, vaults, walls, and many kinds of borders, we may venture to pronounce the art to have then chiefly consisted in the imitation of antique architectural decorations.

"As the study of the ancient Greek and Roman statues attracted the artists of that period on account of their representations of the human figure, so the numerous marble and stone ornaments, so vast in conception and tasteful in execution, adorning pilasters, friezes, altars, vases, &c., invited a similar study for the purposes of raising all the accessories of a picture to an equal degree of perfection and beauty. Here was already a goodly store of foliage and flowers, clusters of fruit, genii, and animals, both in their natural and blended forms; again, upon larger surfaces, variously-shaped compartments exhibiting (upon architectural backgrounds, or in the form of medals,) groups, isolated figures, grouped busts, or single heads. Along with these generally occurs an intermixture of small tablets, oblong, square, circular, semi-circular, or polygonal, bearing allegorical attributes or inscriptions, all which characteristics have been transferred to the modern arabesques. Thus, taking into account the adoption of the forms and treatment of architectural decorations in painting, an application which, notwithstanding the addition of colours, could hardly avoid imparting to the ornamental art of the above-mentioned period somewhat of a formal and strictly plastic character in direct contrast with the painted ancient arabesques, those free emanations of nature, it must be obvious that the baths of Titus, considering the ample store of antique materials already existing, would and could have but a modified influence upon Raphael and his contemporaries.

"In corroboration of this view we may adduce the arrangement in detail of the pillars in the Loggia, where we find, upon some surfaces, clusters of fruit distributed in regular masses, thus exhibiting a reminiscence of the former practice of the Italian masters; upon others we see a number of divided compartments, which are evidently repetitions of casoons, antique ceilings, and archivolts, for which there is to be found



no prototype in the baths; it is only on the principal surfaces that we find the greatest number of imitations in the forms and general arrangement of the ancient wall-paintings. Now, was it from the striking, and, when considered as a whole, inexhaustible variety of these decorations, together with their exuberant store, as compared with the very limited decorative system previously existing, that Raphael was led from one extreme to the other? There is no doubt that in the Loggia the great artist revived the application of ancient arabesques rather with reckless profusion than discreet variety. In passing through the rooms of the baths, and of the houses of Pompeii, the copiousness which we have noticed strikes us with all its force only when considered as a whole; less so, and with no unsatisfactory impression, in the separate rooms, where, notwithstanding the alteration of some small parts, the repetition of the principal decorations upon each wall presents to the mind a sufficient variety without any danger of confusion. In this respect, the first impression of the Loggia in the Vatican is certainly less favourable than that of its prototypes. The ancient arabesques have in almost every instance all their parts kept upon a reduced scale, in order to favour the apparent extent of the locality; and they show a predominating general proportion. They never present such striking differences between the principal subjects as we find in the arabesques of Raphael, which are sometimes uncommonly large, sometimes as unreasonably small, beside and above each other, thereby affecting us like dissonances, and being the more offensive inasmuch as the very choice of the decorations is frequently deficient in symmetry and proportion. Thus, close to the richest arabesques, presenting on a reduced scale elegant and manifold combinations of flowers, fruit, animals, human figures, and views of temples, we find calyxes of flowers putting forth twisted stalks, leaves and blossoms, all which, with reference to the former, are of colossal proportion, thereby not only injuring the accompanying decorations, but also destroying the grandeur of the whole architectural design. Lastly, on examining the choice of subjects with respect to the association of ideas indicated thereby, and the decorations in the symbols and allegories employed to convey them, we find that the works of the Ancients, who employed no other source but their Mythology, appear to great advantage in point of unity when compared with the prevailing intermixture in the Loggia of that imaginary world with the symbols of Christianity. While we condemn this taste, however, it might appear unjust if we did not at the same time acknowledge that Raphael was exposed to irresistible temptation, at once from the spirit of his time, and the bias of his mind towards the stores of ancient art. After having mentioned this imperfection, and admitted as just the censure so frequently brought against him, we now proceed with unmingled satisfaction to that which calls only for praise and commendation. Here it would suffice to give utterance to the feelings which seized us on our first and often-repeated visits to the Loggia in the Vatican, the Villa Madama, the Ducal Palace at Mantua, and other buildings; we might merely mention the effect made upon us by the first impression of the incomparable Papal Galleries, resembling a picture reflected a thousandfold, glittering in most beautiful colours and forms; how the whole view filled us with confused, yet always exciting sensations; how these emotions, on pursuing the examination in detail, became gradually subdued, until the eye was enabled to survey every individual subject as a whole and in its parts, and to analyse and admire without ceasing. In such works we are justified in saying that taste and richness of resource have reached their climax; for, since mechanical means rendered it possible, by the reintroduction of stucco to blend the two effects of Painting and Sculpture, the most distinguished artists carried the execution of the combined decorations to the highest perfection. Proceeding from the Vatican to the Villa Madama, we find immediately on entering that its less extended Loggia, and the less frequent repetition of arched divisions, create a less confusing general effect. In all the principal decorations there is a more harmonising proportion, and a greater symmetry; and in the magnificent roofs, notwithstanding the multiplicity of their ornaments, a more gratifying and

calming influence. Here, where all the pictures of the principal compartments represent scenes from the Mythology of the Ancients, which, in respect to the supplementary use of arabesques and the destination of the building, may be considered as connected with each other, we find a unity conceived more in the spirit of the Ancients. If we adopt the general opinion, and look upon this beautiful work as a second undertaking, conceived by Raphael in the spirit of the Loggia, and executed by Giulio Romano and Giovanni da Udine, we see how the favourite pupils of the incomparable master succeeded in avoiding what he and his contemporaries most assuredly found faulty in his former work; and in this respect Raphael may be said to deserve the immortal fame of being the acknowledged creator of modern arabesques from their first introduction to their last perfection."\*

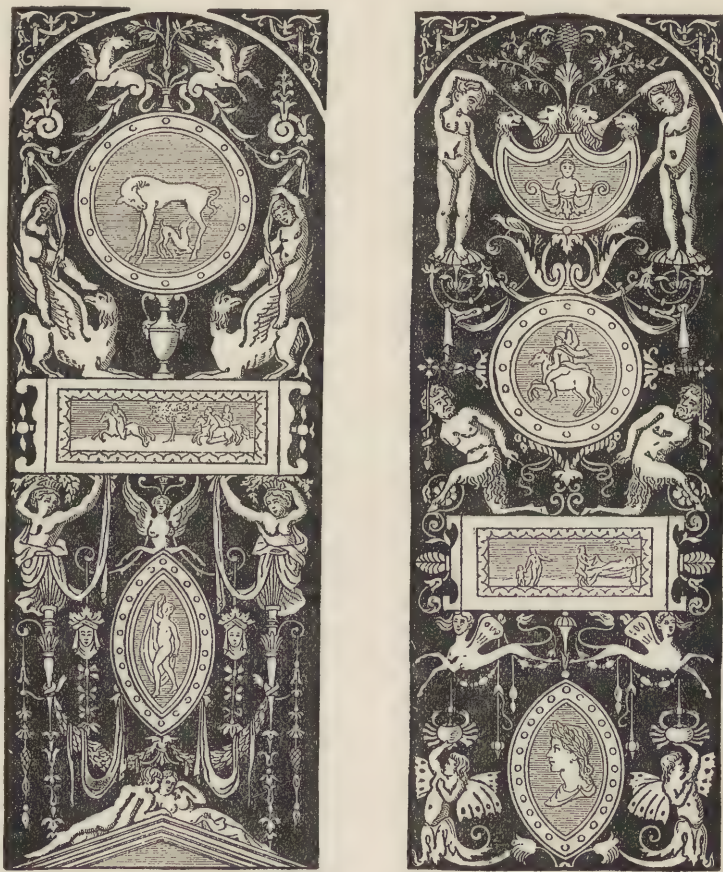
Thus, the greatest school of modern arabesque was founded, upon the ruins of the ancient art, by the genius of one man; it reached its culminating point in his lifetime, and then gradually decayed in the hands of inferior artists, in Italy and elsewhere, until it lost itself in the rococo.

In addition to what is contained in the above quotation, very little need be said with regard to the details usually congregated in the arabesques of Raffaele's school. The more important compositions are found on pilasters, soffits of arches, and vaulted ceilings. The narrow vertical surfaces of pilasters lent themselves readily to a system of decoration in which the piling up of one detail on another, with little or no connection, was a distinguishing feature. The second or middle Loggia of the Vatican and that of the Villa Madama, supply a remarkable series of pilaster decorations; they consist of square, oblong, lozenge, circular, semicircular, oval, and other shaped panels or medallions, containing small figure subjects, allegorical devices, animals, or architectural compositions, placed at intervals, one over the other, and connected by light scrollwork or festoons of flowers. The scrolls and floral decorations spring from the hinder parts of griffins, winged horses, mythical birds, or even human figures; or from vases, calyxes of large flowers, or displayed acanthus leaves; diminutive cupids, genii, fabulous creatures, and birds of gay plumage disport themselves amidst the coiling lines and graceful floral sprays. The uniform disposition of ornament and space is generally observed; but in the most satisfactory compositions, the portions nearest the ground are weighted with closer and bolder designs, while the upper parts are lightened, and more ground appears. The main pilasters in the Loggia or portico of the Villa Madama, are covered with arabesques which take the forms of lofty trees, hung, from top to bottom, with masses of all kinds of fruit, while winged genii appear amid the light foliage: other pilasters are decorated with a delicate scroll-work of foliage and flowers without any intermixture of extraneous forms. The ornamentation of arches is very similar to that of the pilasters, although frequently cut up into panels. It is almost impossible to describe the ceiling arabesques, especially those of the Villa Madama, which are of the most elaborate nature. The large surfaces of the vaults are usually cut up into

\* *Fresco Decorations and Stuccoes of Churches and Palaces in Italy.* By L. Gruner, K.A. London, 1854.



compartments by broad bands of ornament, on rich coloured grounds, blue and red predominating; these compartments contain, in their centres, large circular or oval medallions filled with mythological subjects, and the spaces around them are covered with light arabesques, in which conventional scrollwork is chiefly used, as in the centre dome of the Loggia of the Villa Madama: or scroll-work combined with festoons of flowers, birds, groups of musical instruments, winged figures bearing torches, fabulous animals, pendant fringes, and such like arabesque vagaries. All are drawn with consummate skill, and brilliantly coloured.



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As we before remarked, it is quite impossible to properly illustrate such arabesques without the aid of colour; we, therefore, do not attempt the task here. But to aid the reader, in forming some definite idea of the decorative art of this school, we give two panels (Fig. 1), from a beautiful

cabinet (Renaissance) formed of ebony, inlaid with engraved ivory, the designs of which are after the Vatican arabesques of Raffaele and his pupils.

These panels give a very clear idea of the description of details introduced, and the erratic and whimsical mode of grouping them. A careful study of these will fill up any weak part in our previous remarks.

The student who desires to carefully study Italian arabesques, cannot do better than avail himself of the treasures contained in Gruner's fine work on the fresco decorations of the palaces and churches in Italy, from which we have quoted Hittorff's remarks on their origin. In that work he will find beautifully engraved and coloured plates illustrating the Vatican arabesques; those of the Villa Madama; the still more interesting and refined decorations of the Ducal Palace, at Mantua; the Certosa, near Pavia; the library of the Cathedral of Sienna, and several other important buildings.

**ARABO-BYZANTINE.** The term employed to individualise the second period or style of Arab architecture, which followed the earliest or Arabo-Persic. It obtained during the greater part of the first three centuries of the epoch of the Hegira, or from about the end of the seventh to about the beginning of the tenth century, and was followed in all the countries then under Arab dominion. The style derives its name from the evidences it displays of having been developed under the strong influence of Byzantine art. (See *Saracenic Architecture*.)

The term **ARABE-BYZANTIN** is used by Girault de Prangey, in his work on Arab architecture, with the above signification.\*

**ARABO-MORESQUE OR ARABO-MORESCO.** The term occasionally used to designate that branch of Saracenic architecture which was developed by the Moorish architects in Spain, between the middle of the thirteenth and end of the fourteenth centuries. This, however, is more commonly called Moorish architecture. (See *Saracenic Architecture*.)

Girault de Prangey employs the term **ARABE-MAURESQUE** to individualise the third period of Arab architecture, using the simple term **MAURESQUE** for the last period, as represented by the later works of the Moors in Spain.

**ARABO-PERSIC.** The term applied to the earliest period of Arab architecture, in which the influence of Persian art is dominant. The earliest known example of this style is the mosque of Omar, at Jerusalem, erected in A.D. 637. (See *Saracenic Architecture*.) This period was immediately followed by the Arabo-Byzantine.

**ARAB ORNAMENT.** The system of surface ornamentation introduced by the Arabs, in the east, as distinguished from the more highly developed ornament of the Moors in Spain. (See *Moresque*.)

\* *Architecture Arabe*. Paris, 1841.



The finest examples of Arab ornament are furnished by the mosques of Cairo, and extend, in date, from about the middle of the ninth century to the end of the fifteenth. The earliest of those which display clearly the characteristics of Arab taste and invention are the ornaments of the mosque of Ibn Touloun, erected A.D. 879.

The Arab designers were somewhat restricted in the materials at their disposal; all natural forms endowed with life were forbidden to be represented, according to the precepts of their faith; they were, therefore, compelled to have recourse to their own inventive powers, aided by the knowledge of geometrical forms and their numerous ornamental combinations. In the decorations of the mosque of Ibn Touloun, a severe



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conventionalism is everywhere observable; the forms are certainly derived from vegetation, but they are so treated as almost to defy identification with the natural types. Speaking of these, Owen Jones says:—They “are very remarkable as exhibiting in this early stage of Arabian art the types of all those arrangements of form which reached their culminating point in the Alhambra. The differences which exist result from the less perfection of the distribution of the forms; the leading principles are the same. They

represent the first stage of surface decoration. They are of plaster, and the surface of the part to be decorated being first brought to an even face, the patterns were either stamped or traced upon the material whilst still in a plastic state, with a blunt instrument, which in making the incisions slightly rounded the edges. We at once recognise that the principles of the radiation of the lines from a parent stem and the tangential curvature of those lines had been retained by Græco-Roman tradition, or was felt by them from observation of nature."

Figure 1 shows four typical ornaments from the mosque of Ibn Touloun. The two vertical ones are specimens as widely different in treatment as any to be found among the early ornaments of this building. One, it will be observed, appears to depend chiefly upon the disposition of its sunk lines for its ornamental forms; whilst the other has its surface portions in clearly-marked designs, the sunk parts serving as a true groundwork. The lower example is also in this more advanced treatment, which foreshadows the fully-developed ornament of the thirteenth century.

It is probable that this early method of surface ornamentation was suggested by Egyptian art, although the materials employed, and the mode of producing the ornamental sinkings, were widely different. Under such a shadow-casting sun as that of Egypt, incised-work would at once recom-



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mend itself in preference to outlines in relief, and more especially where the surfaces between these outlines were destined to receive colours. In certain of the patterns in the mosque of Ibn Touloun, we find a further step in surface decoration attempted, portions of their designs being covered with dots or diagonal lines, doubtless with the view of producing a half-tint on the uniform surface, and thus accentuating the plain and fully illuminated portions. Beyond this the early Arab artists do not appear to have gone; but in later times they developed a much more effective treatment, which, in richness of effect and complexity of design, has only been surpassed by the ornamentation of the Moors in Spain, and found in



its highest development in the Alhambra. In this later style, the simple sunk outlines of the early work are abandoned in favour of a general sunk ground-work, upon which elaborate scroll-work, running patterns, and diaper-work are produced in relief of different degrees. The lines and leaves are now shown entwining, passing under and over each other, as the design dictates, with a perfectly graceful and continuous effect. The drawings here given (Fig. 2), from works of the thirteenth century, show two classes of scroll ornamentation; one in which the design simply entwines itself; the other in which two orders of running ornament are introduced, one passing in front of the other, and accordingly in higher



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relief. The scrolls and leaves in this latter example are enriched with incised work. In none of the architectural ornaments of this period do we find a nearer approach to natural forms than these two designs display; and they may be accepted, along with the accompanying illustration (Fig. 3), as representative of the most advanced school of Arab art. For a valuable series of illustrations of this class of ornament we may refer the student to *The Grammar of Ornament*, by Owen Jones, from which the above drawings are derived.

The Arab artists also used geometrical patterns, sometimes simply treated, and at others interlaced in the most complex manner; but in these they did not reach the excellence arrived at by the Moors in Spain.

In the richly illuminated copies of the Koran, of Arab workmanship, the ornamentation invariably shows so strong a sympathy with the Persian work of the same class, that one cannot correctly separate it from the

latter. Indeed, it is probable that many of the fine volumes preserved in the Egyptian mosques are of Persian origin; their details certainly show that Persian works were studied by their illuminators. This mixed style of decoration may correctly be termed PERSIO-ARABIAN. (See *Persian Ornament*.)

**ARABO-TEDESCO.** The term chiefly used by the Italian architects to designate that style of architecture which displays a combination of the later periods of Saracenic with German Gothic architecture.

The style obtained in certain parts of Italy during the twelfth and thirteenth centuries; and the two buildings commonly pointed to, as good and representative examples, are the baptistery at Pisa, commenced in 1152, and the cathedral of Florence, commenced in 1290.

**ARAEOSTYLE.** The term derived from the two Greek words ἀραιός, rare, and στύλος, column; signifying, literally, *distant columned*. The term is commonly accepted as designating a colonnade in which the columns are placed four diameters apart.

Vitruvius does not clearly define the intercolumniation, but, from the following list of his several intercolumniations, it is obvious that it exceeds three diameters.

Term.	Intercolumniation.	Examples.
1. PYCNOSTYLOS.	$1\frac{1}{2}$ diameters.	Temples of the god Julius, and Venus, in Cæsar's Forum.
2. SYSTYLOS.	2 "	Temple of Fortuna Equestris.
3. EUSTYLOS.	$2\frac{1}{4}$ "	Temple of Bacchus at Teos.
4. DIASTYLOS.	3 "	Temple of Apollo and Diana.
5. ARAEOSTYLOS.	(Not given)	Temples of Ceres, near the Circus Maximus; Hercules, erected by Pompey, and Jupiter Capitolinus.

In Gwilt's *Vitruvius*, the following passages occur:—"ARAEOSTYLOS, when placed" (the columns) "more distant from each other than in fact they ought to be. . . In the ARAEOSTYLOS the architraves are of wood, and not of stone or marble; the different species of temples of this sort are clumsy, heavy roofed, low and wide, and their pediments are usually ornamented with statues of clay or brass, gilt in the Tuscan fashion. . . In araeostyle temples the diameter of the columns must be an eighth part of their height. . . If, for instance, in the areostylos, they were a ninth or a tenth part of the height, they would appear too delicate and



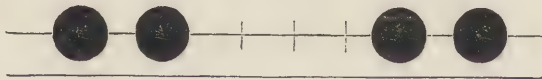
slender; because the air interposed between the columns destroys, and apparently diminishes, their thickness."

The araeostyle appears to have been almost exclusively adopted in connexion with the Tuscan order, in which the use of wood architraves rendered the distant disposition of the columns a matter of no difficulty. It was no doubt adopted in temples and other buildings, frequented by large and moving masses of people, from simple ideas of convenience; it had, most certainly, no elements of beauty to recommend it.



The above diagram shows the araeostyle arrangement of columns placed four diameters apart. The term is sometimes incorrectly written AREOSTYLE.

**ARAEOSYSTYLE.** The term introduced by Perrault to designate an arrangement of the columns of a colonnade in which they are placed in pairs (as close together as their capitals will permit) at a distance of three and a half diameters or more, as indicated in the accompanying diagram.



Perrault has been credited with the introduction of this compound system of intercolumniation, as well as with the origination of the term describing it, but his claim to the double honour is by no means substantiated.\* The best known examples of this arrangement of columns are to be found in the cathedral of St. Paul, London, and the Louvre, Paris. The term is sometimes incorrectly written AREOSISTYLE. For remarks on the subject of the coupled columns, see article *Accouplement*.

\* "The invention of this mode of spacing columns has been generally attributed to Perrault, but an example of a similar system of arranging pilasters is to be found in the palazzo of Agostini Chigi, in the Via di Lungara at Rome, ascribed to Raffaello, who is recognised as the designer of the Palazzo Stoppani, formerly Caffarelli, in the same city, in which coupled engaged columns are similarly applied, while the entrance to the Palazzo Massimi, at Rome, by Peruzzi, presents a modern example of detached columns so employed nearly a century previous to the time of Perrault. Wood and Dawkins, *Ruins of Palmyra*, fol., London, 1753, plates 3 and 14, exhibit an antique instance of the same system in the interior of the court of the great temple of the Sun."—*Dic. of Arch.*, Arch. Pub. Soc., Lond.

**ARBLAST OR CROSS-BOW.** A weapon used in warfare during the middle ages. It consisted of a strong steel bow fixed at one end of a stock, on which there was a channel or case to receive and direct the bolt or *quarrell*, and a catch or lock to hold and release the string.

This weapon does not appear, by any existing records or representations, to have been known prior to the eleventh century;\* but we learn that during the succeeding century it was held to be the most terrible and deadly of the weapons then used. So much was it feared, that the second council of the Lateran, in the year 1139, issued an edict forbidding its employment by Christian armies against each other. The heavy nature of the arblast, and the impossibility of drawing its bow without the aid of some more or less clumsy mechanical appliance, prevented its becoming a favourite weapon even in the Crusades, where the Church offered no objection to its active employment. Richard Cœur de Lion equipped a large body of foot soldiers with cross-bows, in defiance of the injunction of the Lateran Council and a bull of Pope Innocent III. on the same subject. Philip Augustus (1180-1223) established in France the first regular bodies of cross-bowmen, horse and foot. In the battle of Crécy (1346) the French brought into the field six thousand cross-bowmen; and the loss of the battle is attributed to the slowness of their discharge, caused by the rain relaxing the bow-strings. The long-bowstrings of the English archers, being easily removed and kept from injury, caused no inconvenience, and their discharge was uninterrupted. Towards the middle of the fourteenth century, after the battle of Poitiers, the cross-bow fell into disrepute, and was generally abandoned for the long-bow.

The arblast was, during the latter part of the thirteenth and fourteenth centuries, made in three important varieties, mainly distinguished by the mechanical appliances used to draw the string. The first, called by the French *arbalète à pied de biche* or *à pied de chèvre*, from the resemblance its lever bore to a hind's or goat's foot. This lever consisted of two portions; a short hooked piece, which grasped the string, and a long bent and forked piece (to which the short one was hinged), which rested against projections on each side of the stock, and was pressed downwards, by the bow-man, drawing the short arm and string along the stock until the latter was secured by the catch of the lock. The lever was then released, and the arblast was ready to receive its bolt and be discharged. The second, termed *arbalète à cric*, was drawn by a pinion (*pignon*) and rack. The former was enclosed in a strong iron case, which was temporarily held on the stock by a flexible loop of leather thongs, and turned by a long handle. The rack was a straight piece of steel, with teeth along one edge, gearing with the pinion, and a hook at its extremity to lay hold of the bow-string. The third, called by the French *arbalète à tour* or

\* In an Anglo-Saxon manuscript of the eleventh century, preserved in the Library of the British Museum, a weapon of this kind is depicted, but this is the only instance we are aware of. No cross-bowmen are depicted in the Bayeux tapestry.



*de passot*, was drawn by a small windlass and an arrangement of compound pulleys. In hand arblasts, the windlass rested on the butt end of the stock, the other end being firmly held down to the ground by the foot of the bow-man, passed through a sort of stirrup projecting from it. The windlass was turned by two handles. Two pulleys were furnished with hooks to catch the bow-string. When the string was drawn to the catch of the lock, the windlass and tackle were removed and suspended to the soldier's belt until again required. Large arblasts of this description were used for siege and fortification purposes. An illustration of a great *arbalète à tour*, with double rack and pinion mechanism, is given by M. Viollet le Duc, in his *Dictionnaire raisonné de l'Architecture Française*, vol. v., p. 242.

**ARBORES.** The name given during the middle ages to the large and many-branched candelabra which were placed in the choirs of cathedrals and important churches. They took their name from their resemblance to trees.

The finest example of this description of candelabrum is that preserved in the cathedral of Milan. It is a most elaborate work, of the thirteenth century, in bronze gilt, with seven wide-spreading branches supported on a stem, rising from a base of magnificent design, in which large winged animals, conventional scrollwork, and human figures are curiously combined. It is about nineteen feet six inches in height. (See *Candelabrum*.)

Arbores appear to have been usual in English churches. In the inventory of Long Melford church, Suffolk, is the following passage :—

"A candlestick with ten branches standing before the image of Jesus. A candlestick of ten branches standing before the image of St. Ann. A candlestick of ten branches standing before the high altar. A candlestick with three branches, belonging to the Trinity." \*

**ARC.** The term in geometry for any part of the circumference of a circle which does not exceed a semi-circle. In architecture, the term is commonly employed to designate any curved construction in wood, plaster-work, or metal, to which the term *arch* would be incorrectly applied.

**ARCA OR ARCULA.** (*Lat.*) This term has been used by several writers with widely different significations. The most correct, and probably original meaning, is a chest or coffer for containing money and other valuables.†

Vitruvius uses the word for the timber-work of a roof, and also for a

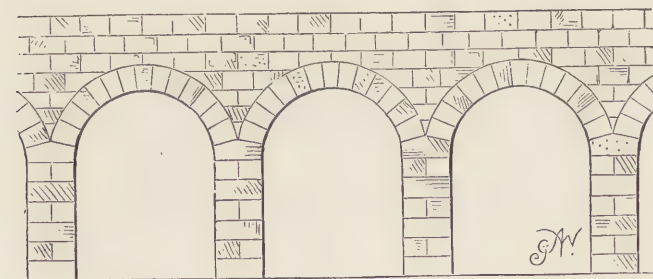
\* Quoted in Pugin's *Glossary of Ecclesiastical Ornament and Costume*.

† "ARCA (αἰθώρας). (1) A chest, in which the Romans were accustomed to place their money; and the phrase *ex arca solvere* had the meaning of paying in ready money. The term *arca* was usually applied to the chests in which the rich kept their money, and was

caisson employed in bridge building; Victor applies it to a coffin, and a tomb or recess for the reception of a coffin; and Festus employs it to designate an oak box or cell in which criminals were confined.

During the early and middle ages the term was applied to the chest for the reception of the offerings, in coin or the precious metals, for the service of the church. Marcellus speaks of the coffer from which the priests were paid their allowance as the "*arcula sancta*." It was likewise used to designate the small casket in which the Holy Eucharist was reserved:—"Thus Cyprian speaks of an '*arca in quâ Domini sacramentum fuit*,' from which fire issued, to the great terror of a woman who attempted to open it with unholy hands."\* It appears probable that this arca was used not only for reserving the Eucharist, but, as a sort of portable altar for the reception of the elements during consecration. Gregory of Tours uses the term ARCA for an altar composed of three slabs, one forming the mensa, laid horizontally upon the other two placed upright on edge, as the sixth century altar in the church of St. Vitale, at Ravenna.

**ARCADE.** This term signifies, in its general sense, a series or succession of arches. It is seldom used alone, in strict architectural nomenclature, being too vague to convey, unaided, a definite idea of the design or treatment of the feature alluded to. The simple use of the term, without



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further explanation or addition, can only convey the idea of an open arched construction in its elementary form (Fig. 1). Of this description, the three arcades of the celebrated Roman aqueduct, known as the *Pont du Gard*, near Nîmes, form good examples. (See *Aqueduct*.)

opposed to the smaller *loculi*, *sacculus*, and *crumena*.—(2) The coffin in which persons were buried, or the bier on which the corpse was placed previously to burial.—(3) A strong cell made of oak, in which criminals and slaves were confined."—Dr. Smith's *Dic. of Greek and Roman Antiq.*

\* Rev. Samuel Cheetham, M.A., in *Dic. of Christ. Antiq.*



The simple term is commonly used in speaking of a well-known example; or of one, the details of which have been, or are to be, described at the time; thus one would speak of the arcades of the Loggie of the Vatican, those of the Doge's Palace and the Piazza of St. Mark, at Venice, or those in the streets of Bologna, without deeming it necessary to amplify the term in anyway.

When an arcade consists of arches supported on Classic columns, it should be designated an ARCADED COLONNADE (see that term), for in this instance the colonnade is the principal element in the composition, the arches being merely substituted for the horizontal entablature, on constructional grounds. When wide intercolumniations (*araeostyle*) became common, the Roman architects were compelled to use arches to span them with safety.

In basilicæ and all churches which have ailes, arcades form important parts of their internal design, and are treated, except in certain primitive and very severe examples, as highly decorative features. Although in all the best examples of this class of arcade the arches are supported on columns, or simple or compound pillars, such a term as ARCADED COLONNADE is never applied to them; unlike the Classic arcades, the arches, in church architecture, are generally more important and more elaborately wrought with mouldings and sculpture than the pillars which support them. In large cruciform cathedrals, ailed throughout, the several portions of the main arcades are individualised by the names of the parts of the building in which they stand; we accordingly speak of the nave-arcades, choir-arcades, apse-arcades, and transept-arcades. These are sometimes, but incorrectly, designated aile-arcades; they are certainly constructed for the purpose of opening the ailes to the body of the building, but they form no part of the ailes proper. The term AILE-ARCADE, if used correctly, should be confined to one erected in an aile or between two ailes, as in numerous Continental cathedrals. (See *Bay*.)

The most important arcades, after those already mentioned, which are to be found in the ecclesiastical structures of the middle ages, are those of cloisters; for descriptions and illustrations of these we must refer the student to our article *Cloister*.

Of triforium arcades, we shall fully treat under the term *Triforium*.

All the varieties of arcades above alluded to are true ones, that is, they are open, and their piers or pillars stand detached. We now come to those which form part of walls, and are pierced with window openings, or filled in with tracery and glass, termed FALSE-ARCADES; and to those found in almost countless numbers in mediæval buildings, which are constructed in or against walls, for decorative purposes only, termed BLIND-ARCADES. These will be found fully described and illustrated in article *Blind-arcade*.

**ARCADED COLONNADE.** A colonnade, or series of columns, supporting arches, instead of a continuous horizontal entablature.

The Roman architects appear to have commenced the adoption of arcaded

colonnades about the middle of the first century of our era; and from that time they became common wherever Roman influence extended. The adoption of the arch completely overcame the difficulty attending wide intercolumniations, a difficulty practically insurmountable with the entablature.

**ARCADED PORTICO.** An elongated portico or covered approach to a church or other building, constructed with open arcades on both sides.

The most noteworthy example of this species of portico is that which leads from one of the gates of Bologna (La Porta di Saragozza) to the entrance of the church of the Madonna di St. Luca, situated on the Monte della Guardia, nearly three miles distant from the city. This important work was commenced in 1674, and completed in 1739. It is twelve feet wide and fifteen feet high, and comprises six hundred and thirty-five arches in its entire length of about three miles.\*

**ARCATURE.** (*Fr.*) The term employed by the French architects to designate the numerous small arcades which are commonly introduced as ornamental features in the buildings of the middle ages. These are chiefly blind-arcades attached to walls, but occasionally are constructed open, as those which surmount the cornices of several ecclesiastical buildings in France, and are found, immediately under the eaves, in numerous Rhenish Romanesque churches, as in the church of St. Martin and the Apostles' church, Cologne. The term is also applied to the small painted arcades introduced in mediæval polychromatic mural decoration.

**ARCEBOCEN.** A late mediæval term for a flying buttress.

Professor Willis, in his *Architectural Nomenclature of the Middle Ages*, says:—"In the Indenture for the roof or vault of St. George's Chapel, at Windsor (5th June, 1505), the outside is to have 'arcebocens (flying buttresses) and crestes, and corses with the king's beastes standing on them, to bear the fanes on the outside of the said choir.' "

**ARCELLA.** A term used during the middle ages to designate a casket, chest, or coffer. It was also sometimes applied to a small room for keeping valuables.

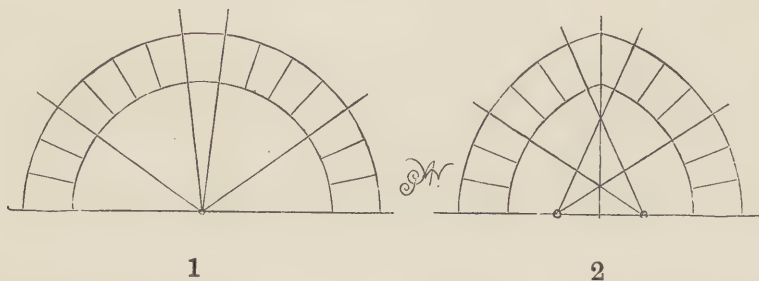
**ARCH.** The general name given to a construction formed of several blocks of stone or marble, or of bricks, set in a vertical position on the line of some curve, the stones or bricks being so shaped that their joints are upon the true radiating lines of the curvature, as indicated in the accompanying diagrams (Figs. 1 and 2).

The arch, in its several forms, is employed for four purposes.—1. To

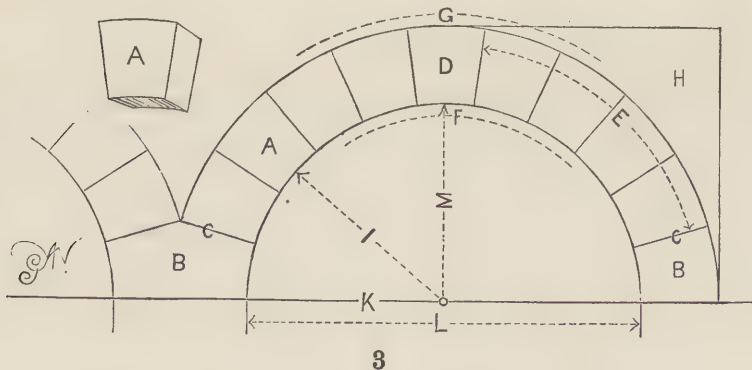
\* This remarkable portico is fully described in the *Handbook for Travellers in Northern Italy*. Murray.



span a given space, and support the superstructure over that space. 2. To span a given space, and act as a prop or buttress against the lateral thrust of a vault or other arch. (See *Flying Buttress*.) 3. In a continuous shape, to form a vault. 4. Used in foundations, in an inverted position, for the purpose of distributing the weight of piers, at certain points, over the entire extent of the space between them. (See *Inverted Arch*.)



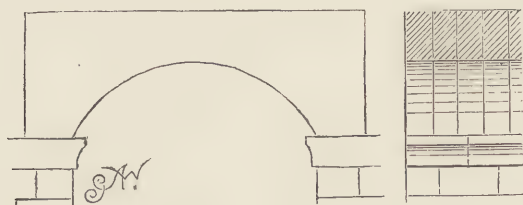
Before we treat of the arch from an historical point of view, or speak of the several forms it has assumed in the different styles or periods of architecture, we may here give the terms commonly used to designate its various parts, as marked by letters in the diagram (Fig. 3). The blocks,



of a wedge-shape, which compose the arch (A), are the *voussoirs* or *arch-stones*; but when the arch is of brick, its component parts are termed *arch-bricks*. The lower blocks, on each side (B), which immediately rest on the supporting piers or columns, are the *springers*, or, as they are more rarely termed, the *reins*; and the upper surfaces of these blocks (C), cut radiating to the centre of the arch, are the *skewbacks*. The centre voussoir (D) is the *keystone* or *key*. This is not invariably introduced in arches, a centre joint frequently occurring, as in the generality of Gothic pointed arches; but when used, it is the last voussoir placed, and from that fact derives its name. The portions (E) from the springers to the keystone, or

from the springers to the vertex of the arch, are termed the *haunches* or *flanks*. The under or interior surface of the whole arch (F) is the *intrados* or *soffit*, and the upper or exterior surface of the same (G) is the *extrados*. The surface (H) above the haunch, enclosed within a vertical line drawn from the springer, and a horizontal line from the crown or vertex of the arch, is termed the *spandril*. I is the *radius*; K the *chord*; L the *span*; and M the *height* of the arch.

At what date in the world's history, or by what race of builders the arch was first introduced in constructive architecture, will never be known to us; its origin is wrapped in impenetrable obscurity. The earliest evidences of its use, however, have been found in Egypt, and appear to point to that country as the probable place of its invention. Sir J. Gardner Wilkinson says:—"I have frequently had occasion to mention the antiquity of the arch, and have shown that it existed of brick in the



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reign of Amenophis I., as early as the year 1540 before our era, and of stone in the time of the second Psammaticus, B.C. 600. I have suggested the probability of its having owed its invention to the small quantity of wood in Egypt, and the consequent expense of roofing with timber, and have ventured to conclude from the paintings of Beni-Hassan that vaulted buildings were made in Egypt as early as the reign of Usertesen, the contemporary of Joseph, who lived between three and four thousand years ago." Dr. Samuel Birch speaks of a much earlier example. In a note to the above paragraph, in his new edition of *The Manners and Customs of the Ancient Egyptians*, he says:—"The newly-discovered rudimentary arch of the age of the 5th Dynasty assigns it to a still earlier age." Vaulted tombs of the 6th Dynasty have been discovered at Abydos, which was one of the most important cities of upper Egypt.\*

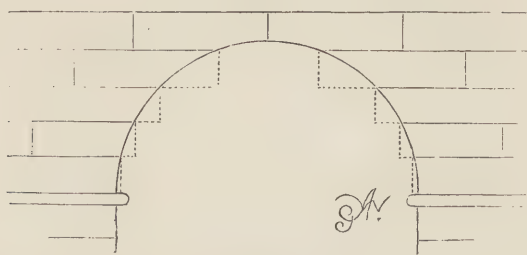
In addition to the true arches of brick and stone which have been discovered in ancient Egyptian buildings, two varieties of imitations have

\* "The necropolis of Abydos has furnished a large proportion of the stelæ and other objects of interest in the museum of Cairo. The tombs are principally of the VIth, XIIth, and XIIIth Dynasty periods. Those of the XIIIth are often small pyramids of crude brick, with the centre hollowed out. Many of the tombs of the VIth Dynasty are vaulted, and present instances of the true arch."—*Handbook*. Murray.



been found; one in the temple of Seti or Sethi I., father of Rameses II., and another in a temple of Thebes, supposed to have been erected by Amun-noo-het, the sister of Thothmes II. and Thothmes III. From the inner or second great hall of the temple of Seti I. open seven chambers, whose ceilings are in the form of vaults. These, however, are not constructed on the principle of the arch, but are formed of deep blocks of stone, extending from one wall of the chamber to the other, placed side by side, on edge, and hollowed out underneath, to give the effect of a vaulted covering, as indicated in diagram (Fig. 4).

The inner chambers of the temple at Thebes are also covered with imitation vaults, but these are constructed in a different manner to the above. They were formed of long blocks of stone, laid horizontally, projecting over each other, on both sides of the chamber, until the upper two met in the centre; the lower angles of the courses were then cut away, until a semicircular ceiling was produced (Fig. 5). Speaking of



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this variety, and the building alluded to, Wilkinson remarks :—" Here, however, a reason may perhaps be given for its introduction, being in the style of a tomb, and not constructed as an Egyptian temple, nor bound to accord with the ordinary rules of architecture.\* The chambers, like those of the tomb of Saqqâra, lie under a friable rock, and are cased with masonry, to prevent the fall of its crumbling stone; but instead of being roofed on the principle of the arch, they are covered with a number of large blocks placed horizontally, one projecting beyond that immediately below it, till the uppermost two meet in the centre, the interior angles being afterwards rounded off to form the appearance of a vault. The date of this building is about 1500 B.C., consequently many years after the Egyptians had been acquainted with the art of vaulting; and the reason of their preferring such a mode of construction probably arose from their calculating the great difficulty of repairing an injured arch in this position, and the consequences attending the decay of a single block; nor can any

\* This temple was constructed in a manner entirely different from that of any other known example in Egypt. It was built on the slope of a hill, and its courts were connected by flights of steps. The chambers were excavated in the hill, and lined with masonry.

one suppose, from the great superincumbent weight applied to the *haunches*, that this style of building is devoid of strength, and of the usual durability of an Egyptian fabric, or pronounce it ill-suited to the purpose for which it was erected."

This class of construction was used on a much larger scale elsewhere, as in the treasury or tomb of Atreus, at Mycenæ, erected by the Pelasgi some time previous to the Dorian invasion, in B.C. 1104. This remarkable structure consists, principally, of a circular chamber, about forty-eight feet six inches diameter at the floor level, in the form of a pointed dome, internally. The courses of stone forming the vault were laid horizontally, each one projecting over that below, until the apex was reached, and closed with a single large stone. The angles of the courses were then cut away to the curves of the vault.

The Egyptians also used the simplest forms in which the arch can exist, namely, constructed of two long stones, resting at their lower ends upon the side walls, and meeting together at their upper ends, as in the king's chamber in the Great Pyramid; or of three stones, two inclined from the walls inward, and the third laid horizontally between their upper ends, as in a tomb near the Pyramids of Gizeh. In this latter example we must remark that the three-stoned arch was not introduced by its builder as a constructive feature, being surmounted by a true semicircular arch of four rings. From Hoskins' *Travels in Ethiopia*, we learn that the true pointed arch is to be seen in the pyramids of Meroë.

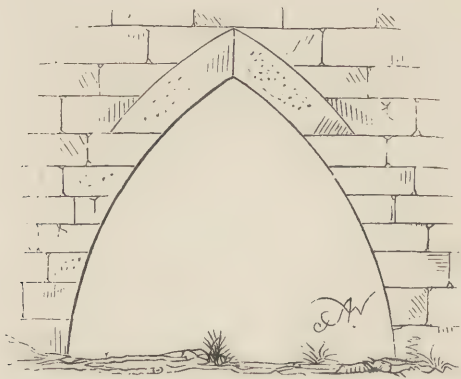
The arch was both thoroughly known to, and freely used by, the Assyrian architects. The researches of M. Place, while French Consul at Mosul, prove this fact beyond all doubt. In his extensive excavations at Khorsabad, he discovered a pair of the city gates, constructed close together, one of which had evidently been used for chariots or other wheeled vehicles, and the other devoted to pedestrians. The chariot gate has a semicircular arch, decorated with a sort of archivolt of blue and yellow enamelled bricks, rising from plain vertical jambs. The gateway for foot-passengers is also arched in a similar manner, but, instead of plain jambs, the arch springs from the backs of winged human-headed bulls. Other examples of the arch have been discovered in Assyrian buildings, but none show more fully than these gateways the perfection its construction was carried to at so early a date (about B.C. 720).

The Assyrians also employed the pointed arch for certain purposes. Fergusson says:—"So far as we can now understand from the discoveries that have been made, it seems that the Assyrians used the pointed arch for tunnels, aqueducts, and generally for underground work where they feared great superincumbent pressure on the apex; and the round arch above ground where that was not to be dreaded; and in this they probably showed more science and discrimination than we do in such works."

The Etruscans were evidently acquainted with the arch, and some writers have gone so far as to credit them with its invention. Recent discoveries have, however, proved their opinions to be unfounded. The



Etruscans used the true arch at an early date in the construction of aqueducts, bridges, and the gates of their cities; and their perfect knowledge of its principles is proved at the present day by the arch of the Cloaca Maxima, at Rome, which is acknowledged to have been constructed by Etruscan workmen, or under an Etruscan architect's supervision. Like the Pelasgi in Greece, the Etruscans adopted the form of the pointed arch, constructing it with horizontal courses, as in the treasury of Atreus, already described. A good example is presented by a gateway at Arpino; but a still more interesting one is found in an aqueduct, at Tusculum, which shows both the horizontal and, so far as its upper portion is concerned, the true mode of construction. Fig. 6 gives an idea of this arch, in which it will be observed that while the lower part is built in horizontal courses, the upper two stones are practically voussoirs, meeting together in



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a vertical joint at the vertex, as in an ordinary Gothic arch. Alluding to these two examples, in his chapter on Etruscan architecture, Mr. Fergusson remarks:—"In either of these instances the horizontal arch is a legitimate mode of construction, and may have been used long after the principle of the radiating arch was known. The great convenience of the latter, as enabling large spaces to be spanned even with brick or the smallest stones, and thus dispensing with the necessity for stones of very large dimensions, led ultimately to its universal adoption. Subsequently, when the pointed form of the radiating arch was introduced, no motive remained for the retention of the horizontal method, and it was entirely abandoned."

The Greeks were doubtless acquainted with the principles of the arch, but they never used it as an architectural feature, notwithstanding that the remains of Pelasgic art, at Mycenæ, Assos, Thoricus, and numerous other places, kept both the semicircular and pointed forms before their eyes, though, so far as we know, not the radiating or true method of construction.

We may now turn to Roman architecture, at its starting point under Etruscan influence, from which the history of the arch is well known and easily traced. The earliest existing example of a Roman arch is that of the Cloaca Maxima, built when Rome was virtually an Etruscan city, and before the parenthesis of art apathy set in, which obtained during the whole period of her consular government. The Roman builders, quickly learning from the Etruscans the mode of constructing the semicircular arch, boldly laid hold of it as a feature to be made much of; and in their hands it certainly was developed in a way far beyond what had been attempted before. With the store of beautiful and suggestive architectural materials in the temples of Greece and Etruria for their study, and in possession of the arch, the capabilities of which they quickly realised, it is not to be wondered at that the Roman architects struck out a new path for their genius, which culminated, so far at least as the arch is concerned, in the Rotunda of the Pantheon and the Basilica of Maxentius, or the Temple of Peace.\* The former is covered with a hemispherical dome, about one hundred and thirty-nine feet in diameter, which springs from an entablature at the height of seventy-five feet from the floor. The latter has the six compartments of its ailes covered with semicircular arches, each of seventy-two feet span, and its nave with an intersecting vault of eighty-three feet span, and carried to the height of one hundred and twenty feet from the floor. In neither of these important works are there any evidences of timidity on the part of their designers, or any indications of failure in their construction. We may safely pronounce, therefore, that at the beginning of the fourth century of our era the full capabilities of the arch had been realised by the Roman builders.

The semicircular arch was exclusively used by the Romans, and became the chief constructional feature in their aqueducts, bridges, arches of triumph, baths, and amphitheatres erected during the Empire. This form of arch has therefore been commonly designated the Roman arch, and all the styles of middle age architecture; in which the semicircular arch is an essential and predominating feature, are designated the Romanesque, to distinguish them from those styles in which the pointed arch prevails.

Throughout the entire range of Byzantine architecture the semicircular arch is steadfastly adhered to, along with the hemispherical dome of the Romans. In some of the earlier examples, however, the horizontal architrave does not entirely give place to the arch, as in the church of SS. Sergius and Bacchus, built by Justinian. But in the great church of St. Sophia, the work of the same emperor, both the semicircular arch and the hemispherical dome assert themselves in probably the most complete combination ever essayed. In this building the Roman entablature entirely disappears, and the arches spring immediately and in the most

\* Great authorities differ so materially as regards the dates at which these buildings were erected; that we cannot assume the responsibility of deciding between them. We therefore give no dates here.



consistent manner from the abaci of the capitals of the pillars. The arch is no longer an expedient introduced on constructive grounds alone; it here becomes an æsthetic element in the style, or, indeed, the element which creates the style itself. In the cathedral of St. Mark, erected in the eleventh century, the treatment of the semicircular arch is essentially the same as in St. Sophia, built five centuries before. We must, however, not neglect to mention that the Byzantine architects were acquainted with the pointed arch; indeed, it has never been entirely absent in Eastern architecture since, at least, the times of the Pelasgic builders. It appears, though in a somewhat timid form, in the earliest known Christian church (fourth century), that constructed over our Saviour's tomb at Jerusalem. Pointed arches were also introduced in the aqueducts at Constantinople, built by Justinian: this fact alone proves that the Byzantine architects were, in the early part of the sixth century, conversant with their constructive properties; and it doubtless was from the Byzantines that the Arabs obtained the knowledge which speedily led them to adopt the pointed arch as a prominent feature in their architecture.

The arch, or at least its form, appears to have been known to the Indian architects at an early date. This is proved by the rock-cut temples of Karli (excavated probably in the first century of our era), Ajunta, and other places. Speaking of the arched ceiling of the Karli temple, Mr. Fergusson remarks: "These sculptures on the capitals supply the place usually occupied by frieze and cornice in Grecian architecture; and in other examples plain painted surfaces occupy the same space. Above this springs the roof, semicircular in general section, but somewhat stilted at the sides, so as to make its height greater than the semi-diameter. It is ornamented even at this day by a series of wooden ribs, probably coeval with the excavation, which prove beyond the shadow of a doubt that the roof is not a copy of a masonry arch, but of some sort of timber construction which we cannot now very well understand." But notwithstanding that they had the form of the arch continually before their eyes, the Indian architects steadfastly refused to adopt the constructional arch in their buildings. The pointed dome, constructed of horizontal courses, as in the treasury of Atreus, is however met with in India; but we are not aware of a single specimen of a dome on the Roman principle having been discovered.

In Sassanian architecture the semicircular arch was used in its true construction, as is proved by the remains of the early buildings at Al Hadhr (probably dating about the middle of the third century A.D.), which show the semicircular arch and vault in true construction. Details of these buildings bear a strong impression of Roman art, though no indications of Roman skill. In later buildings the Sassanian architects ventured farther, and displayed an independent spirit of invention in the treatment of both domes and arches. In the remains of the palace, "Tâk Kesna," at Ctesiphon, we find a novel form of arch, apparently designed with the view of reducing the lateral thrust; it is in the form of a semi-ellipse

(the ellipse being cut on its lesser axis); the height of the arch is about six-eighths of its span.

This form, probably the most unsatisfactory from an æsthetic point of view that could be devised, never became established in later styles of architecture, and it is questionable if it went much further than an experimental trial in the hands of the Sassanian architects themselves. We know so little of their architecture, however, that it is unwise to offer any decided opinion on the subject.

We may, at this point, appropriately speak of the arch as met with in the Saracenic styles, and then pass on to the Western styles of Christian architecture, which will carry our hasty survey up to the sixteenth century, a date at which we may well leave it.

The empire of the Saracens, which sprang so rapidly into power in the seventh century (the Hejira, A.D. 622), had its birthplace between the empire of the Byzantine Greeks and Persia, and may be said to have established itself upon the spoliation of one and the overthrow of the other. The Arabs having had no architecture of their own worthy of the name, it is reasonable to conjecture that they would readily adopt that which commended itself to their fervid fancy, or select certain features and treatments from the styles they were becoming familiar with, on both sides of them, to be fused together by their own genius and skill into an architecture in harmony with their tastes, and suitable to the requirements of their new religion. Such was the case; the earlier styles of Saracenic architecture were based, on the one hand on the Byzantine, and on the other hand on Persian or Sassanian art; and the later styles bear evidences of a combination of elements derived from both, gradually moulded, under the fiery genius of the Arabs and Moors, into what must be considered a complete and distinct style of architecture.

As we have previously stated, the pointed arch appears never to have been entirely lost or overlooked in the East, from the time of the Pelasgic builders; and it is evident, at the rise of the Saracen empire, that it was a sufficiently familiar form to readily commend itself to the Arab builders, as, æsthetically and constructionally, an appropriate one to adopt as a distinguishing feature in their new architecture. It is to be seen in the oldest Saracenic buildings, as in the mosque erected by Amrou, at Old Cairo, in A.D. 642 (the twenty-first year of the Hejira); and in great numbers, and in all the chief parts of the construction, in the mosque El Aksah, erected by Abd el Malek, at Jerusalem, in 691. A drawing of the interior of this mosque is given by Mr. Fergusson,\* showing arches of a form one would least expect to find in a building of its age. They are of a shape closely resembling our four-centred Tudor arches, highly tilted above the capitals of the columns. Whether they are struck from four centres, or have straight lines towards their points, we have no proper materials on which to decide. In the important mosque of Ibn Touloun,

\* *Handbook of Architecture* (1859), p. 385.



erected at Cairo in the year A.D. 879, all the arcades and window openings have pointed arches, the former being slightly horse-shoe in form. One round horse-shoe arch is also to be found in this building.

Whilst the Saracenic architects in Egypt were so freely using the pointed arch in their works, those in Spain were designing on the Roman models and traditions of the country, and adhering to the round arch. In the great mosque of Cordoba, erected between the years A.D. 786 and 796, and added to at different times between 965 and 1200, the pointed arch does not exist; the horse-shoe treatment is prevalent, and in certain portions of the work multifoiled arches are introduced, imparting a very distinctive character to the style. In the later works in Spain, and especially in the northern portion, the pointed arch appears, though never in its Egyptian fulness of treatment. Both in Persian and Indian Saracenic architecture, arches of ogee forms are frequently met with in addition to those already mentioned.

The forms of Saracenic arches may be enumerated thus:—pointed, pointed horse-shoe, round, round horse-shoe, multifoiled, and ogee.

Before leaving Saracenic art altogether, we must just glance at Sicilian architecture, in the most noteworthy examples of which Saracenic influence is very obvious. There has been considerable discussion and diversity of opinion with reference to the introduction of the pointed arch into the buildings erected for the Normans, in Palermo and elsewhere, from the eleventh century, and we are not in a better position than others to settle this question. We may, however, express our firm conviction that it was in no way owing to the Normans themselves. One cannot examine the highly stilted arches of the cathedral of Monreale, without one's mind being at once directed to those of the early Arab mosques; and further consideration and investigation fully support the belief that it was from Egypt the Sicilian arch was derived. In the cathedral of Monreale, the window openings, as well as the arcades, have pointed arches; those of the latter being stilted to about one-third their height from the abaci of the capitals, and are devoid of any description of mouldings, a fact which again points to their Saracenic origin.

We have now to return to Rome, and briefly trace the arch thence through the western Christian styles of architecture. In all the Italian basilicæ the semicircular arch is an important constructive and decorative feature; although in some examples, as in the original basilica of St. Peter and in that of St. Maria Maggiore, at Rome, it did not take the place of the horizontal entablature of the main or nave colonnades. In the cathedral of Pisa (end of the eleventh century) the semicircular arch is used as the dominant feature throughout, and appears in a wearying profusion in its external decoration. There seems to be no clearly marked line of distinction between the Romanesque and Pointed styles in Italy, for we find, so late as the fourteenth century, in Lombard architecture, the round arch adopted, whilst all besides is strongly Gothic in feeling and treatment. Indeed, throughout the entire range of Italian Pointed archi-

ture, the old love for the round arch is repeatedly showing itself. Along with strongly marked horizontal lines, the adoption of this arch in many leading features, as in the main doorways, for instance, materially modifies or suppresses the upward-springing effect which belongs to Pointed architecture, and imparts a character to Italian Gothic which is not met with in the more consistent treatments of the Pointed styles north of the Alps.

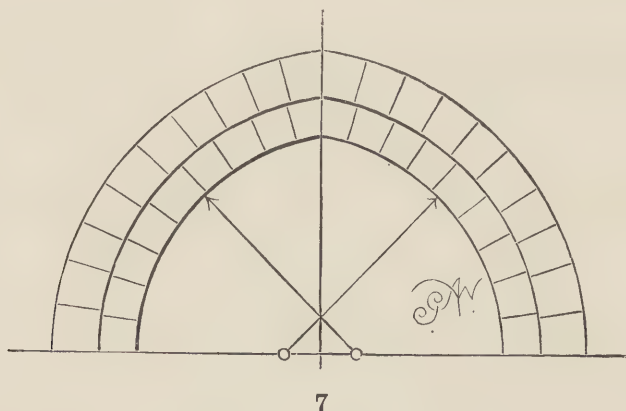
Along the valley of the Rhine the round arch was used, without deviation, until the influence of French Gothic asserted itself, in the early part of the thirteenth century, and practically introduced the pointed arch into German architecture.

In France, the one-centred arch was almost invariably employed in construction prior to the eleventh century, and the instances in which another form was used are extremely rare. The church of Saint-Front, Périgueux, however, furnishes examples of pointed arches of the tenth century: these were probably built under a slight Saracenic influence, conveyed through the Basques; and were evidently constructed to receive the pendentives of the domes, features very difficult to introduce between round arches. All the lesser arches of Saint-Front are semicircular. A century later, in the abbey-church of Souillac (Lot), we again find the main arches which support the domes, in the pointed form, with pendentives between them, while the round arch is adhered to throughout the rest of the structure. In the abbey-church of Fontevrault (Maine-et-Loire), built in the twelfth century, a similar treatment obtains. During the twelfth century, both the semicircular and pointed arches were used separately in different buildings, and in many cases associated in the same structure; indeed, in many parts of the country, so strong was the influence of Roman tradition that the one-centred arch retained a firm hold on the tastes of the people long after the superior constructive properties of the two-centred arch were fully realised; and there is no doubt that the ultimate universal adoption of the latter was due to the important position it occupied in the art of vaulting.

As a rule in early buildings the architects, as if reluctant to lose the more familiar form, gave to their arches the slightest possible pointed character, keeping their two centres very close together; this treatment obtained largely except where the exigencies of construction rendered an approach to the equilateral (*arc en tiers-point*) imperative, or at least advisable. In the twelfth century doorway of the church of Saint-Trophime, at Arles, for instance, the two centres are only about one-fifth of the span distant from each other; and in the windows of the church of Saint-Yved, Braisne (Aisne), we meet with the same transition arch. The pointed arches in the church of Fontevrault, already alluded to, have their centres only about one-ninth their span distant from each other. In the twelfth century church of Saint-Martin, at Laon (Aisne), both round and pointed arches are used in the windows; and a certain feeling of inconsistency is imparted to the composition by the round-arched windows being placed above the pointed ones. The obtuse pointed arch, or what Rickman has



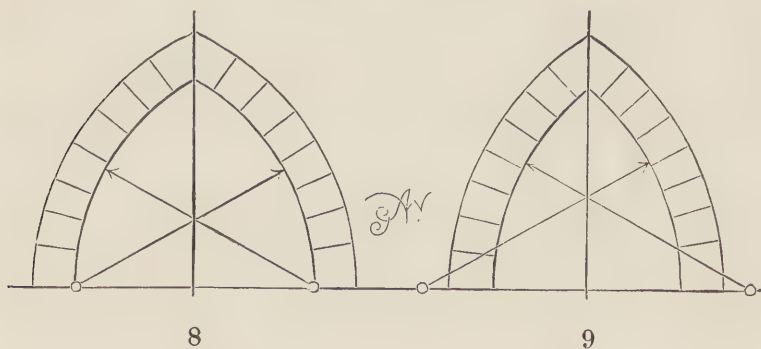
designated the *drop-arch* (Fig. 7), was never completely abandoned by the French architects; it was frequently used in the windows of the thirteenth century, with the view of giving more room for the geometrical tracery of the period, as in the clerestory of the abbey-church of Saint-Denis.



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The equilateral arch (Fig. 8), and forms very closely approximating to it, were often introduced in the buildings of the thirteenth century; we find in a beautiful doorway of Rouen cathedral (la portail de la Calende) the perfect equilateral arch.

The lancet arch, or that in which the radii are longer than its span, and accordingly lie outside the intrados (Fig. 9), is not so frequently met with in French architecture as the foregoing, and does not appear ever to have



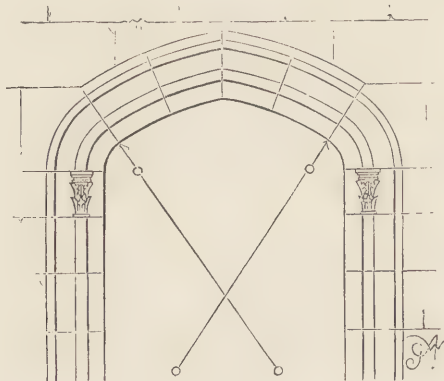
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become a favourite on the Continent. A fine example is furnished by the arch of the doorway of the Virgin, in the cathedral of Notre-Dame, Paris.

Stilted arches are very common in French architecture. In Romanesque work we find them in a very pronounced form, as in the doorways of the abbey-church of Vézelay, and the church of Saint-Sernin, Toulouse, and in the transept windows of the cathedral of Noyon, erected in the middle of the twelfth century. In early pointed work the stilted arch frequently

occurs, as in the doorway of the church of Saint-Genest, Nevers (twelfth century), in which the stilt is very marked, being about one-third of the height of the arch from the capitals of the nook-shafts. The practice of filling in the arches of doorways with sculptured stone-work from a horizontal line considerably below the springers, so much in vogue with the architects of the thirteenth and fourteenth centuries, gives a decidedly stilted effect to them, further supported by the richly relieved canopy-work which is carried across the jambs, at that line, and above the heads of large statues. The doorway of Rouen cathedral, above mentioned (*la portail de la Calende*), is a good example of this. Of the stilted arches found in the interiors of the French ecclesiastical buildings, rendered necessary by the almost universal adoption of the apse, and to meet the exigencies of vaulting, it is not necessary to particularly speak in this article. (See *Stilted Arch* and *Vault*.)



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The four-centred arch, so common in our own late pointed architecture, is rarely met with in French buildings, and never formed a characteristic feature of a period, as it did on this side of the Channel. Indeed, the name commonly given to it by French architects (*Arc Tudor*) shows how little it has had to do with their own pointed architecture.\* M. Viollet-le-Duc gives a very interesting example† from a doorway in the cathedral of Clermont (Puy-de-Dôme), which he attributes to the thirteenth century. We naturally feel diffident in differing from the opinion of so great an authority on the subject of French architecture, but we must say we think this is obviously too early a date for such a work. So far as we are aware,

\* "ARC TUDOR.—Arc qui a pris naissance sous les Tudors, c'est-à-dire à la fin du xv<sup>e</sup> siècle et au commencement du xvi<sup>e</sup>; il a été très-employé par les architectes anglais; c'est en effet un arc d'origine anglaise, une sorte d'ogive très-surbaissée. On retrouve cet arc en Belgique et très-rarement en France."—E. Bosc., *Dict. rais. d'Arch.*

† *Dict. rais. de l'Arch. Française*, vol. vii., p. 451.

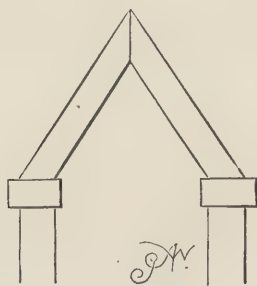


there is no example of a pure four-centred arch like this existing in England to which so early a date can be assigned. The four-centred arch (Fig. 10) did not come into anything like general use here until about the middle of the fifteenth century. The proportions of the accompanying illustration are those of the French example, and are similar to those of many English arches of the Tudor period.

In the latest period of the Mediæval architecture, on the Continent, immediately approaching the Renaissance, the pointed arch began to disappear, and the semi-elliptic and semicircular came into use. Instances of this transition are numerous.

Segmental arches were used by the French architects throughout all the periods of their architecture.

We may fairly surmise that the arch was unknown in Britain previous to the Roman Invasion, and accordingly it may be said to have had no infancy here. With the first Roman building of any importance the arch was made known in its true construction to the native builders; and since then it has never fallen into disuse. In the Saxon period, the angular arch (Fig. 11), to which we have already alluded in connexion with Egyptian art, was occasionally used over small openings; \* but otherwise, and in all



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important positions, the semicircular arch was adopted. The latter form obtained all through the Norman period, the pointed arch appearing shortly before the middle of the twelfth century. From that time to the end of the century both round and pointed arches were used, the latter gradually superseding the more ancient form. The round arch was not however totally abandoned in the following centuries; we find it in the retro-choir of Chichester cathedral in the choir triforium of Whitby abbey, and in the doorways of Castor church, Northamptonshire, and Whitwell, Rutlandshire, of the thirteenth century; and in Water-Newton church, Hunts, of the fourteenth century.

The segmental arch is common in works of the twelfth and two following centuries; it fell practically into disuse in the fifteenth century, the low, four-centred arch taking its place.

\* In Brigstock and Barnack churches, Northamptonshire; and Deerhurst, Gloucestershire.

During the Early English, or First Pointed style, arches of various proportions were adopted; but the lancet and equilateral arches were most generally employed in important buildings, as in Westminster abbey and Lincoln cathedral, where we find the lancet arch in great perfection and freely introduced; and in Salisbury cathedral, where the equilateral is generally used. The obtuse-angled arch is often met with in small buildings, and, though less frequently, in some large ones, as in Beverley minster. Trefoil and cinquefoil arches are also common during this period, being introduced in doorways, as at Warmington, Northamptonshire, (trefoil), and Salisbury cathedral (cinquefoil); and in numerous arcatures or blind arcades, as in Beverley minster, Lincoln cathedral, and Wells cathedral.

In the Decorated period, which obtained to about the end of the fourteenth century, the equilateral and obtuse-angled arches were most in favour, the lancet form having gradually fallen into disuse towards the close of the preceding century. Ogee arches are occasionally found in late works, as in windows in Higham Ferrers church, and several other churches in Northamptonshire.

A greater variety of shapes and proportions are found in the arches of the Perpendicular or Third Pointed period than in any of the preceding, but that which may be pronounced a characteristic of the style is the four-centred or Tudor arch (Fig. 10). This arch is found in very different proportions, sometimes approximating to an obtuse-pointed arch, and at others having a height of only about one-third its span. Good examples of this arch, in its several types, are to be found in Henry the Seventh's chapel, Westminster; Abbey-church, Bath; Winchester cathedral; King's College chapel, Cambridge; and numerous other important buildings. The Third Pointed period extended to the middle of the sixteenth century, when it merged into the English Renaissance, commonly designated the Elizabethan style, in which the Roman arch again appeared.

In the foregoing hasty survey of the rise and progress of the arch, in the leading epochs and styles of architecture, we have purposely avoided going into particulars relative to the several modes of artistic embellishment it has been subjected to; these, along with other matters of detail, will be found in the articles specially devoted to the various kinds of arches, under their distinguishing names.

**ARCHÆOLOGY.** The term now commonly employed to designate that branch of study and research which is chiefly directed towards the works of antiquity, with the view of realising the manners, customs, modes of life, and mental development of ancient nations, as elucidated by their artistic, monumental, mechanical, and literary remains.

From this description it will be seen that archæology is as comprehensive and complex a study as any of the sciences, if it cannot strictly be classed as a science itself; and it is one which must enter largely into the education of the architect, the painter, the sculptor, and the historian; for unless



all these are conversant with what it alone can teach them, they cannot hope to attain to any eminence in their respective occupations.

Archæology embraces the study of ancient buildings (habitations, temples, and tombs), with their furniture and appointments—for the purpose of acquiring a correct knowledge of the modes of private life and public intercourse, the religious beliefs, ceremonies of worship, treatment of the dead, and methods of interment of ancient nations; the study of implements of husbandry, weapons of the chase, offensive and defensive armour, and the mechanical appliances used in manufactures—for the purpose of learning their industrial habits, their knowledge of and preference for certain kinds of food, and their methods of cooking and eating the same, their modes of warfare, their costumes and general knowledge of the refinements of life connected with dress; the study of written documents relating to religion, government, and laws, historical records, and literature generally—to acquaint us with their authors' ideas on divine, mythical, and supernatural subjects, the origin and destiny of the soul, their notions of right and wrong, justice and injustice, and the causes of their national greatness and decline; and lastly, the general study of all their works, in architecture, sculpture, painting, paleography, numismatics, and all the formative and decorative arts \*—that we may acquire a clear knowledge of their art-culture, modes of thought and expression, their aims and aspirations, their methods of study and sources of inspiration, their materials and tools and their skill in manipulating them; and, as a natural outcome of all this, to store up every observation and lesson for our guidance in the study and practice of the arts in our own generation. He who pursues the study in this spirit makes a wise use of archæology, and is the true archæologist.

**ARCHAIC.** Peculiar to the earliest epochs of art and remote antiquity. The term is commonly used with reference to the representation of the human figure, which, during the infancy of art, was rendered in a certain stiff and formal manner indicative of restricted power on the part of the artist. The earliest period of Greek art is usually designated the Archaic period, and may be accepted as that which obtained previous to the year B. C. 450.

\* "According to Grüber, artistic archæology may be divided as follows:—1. *Historico-literary* examinations of the works still existing in museums, galleries, and private collections; the analytical method gives in this the best guide. 2. The *Technology* of the antique regarded as Art-history, and explaining style, method, and the treatment of works of Art according to the different epochs. 3. The *Criticism* of Art, which teaches the principles by which the antique is to be tried or decided as belonging to a certain period of Art. 4. The *Interpretation* of Art, which explains the symbolical part of ancient Art and artists' fables, the manner of treating the meaning of ancient works of Art, and the necessary aids, mythology, history, antiquities. 5. The *Æsthetics* of the antique, by which we comprehend the spirit of antiques (deciding their disposition, action, and expression), and, showing us pure beauty, awakens and animates the feeling of it."—Quoted in Fairholt's *Dict. of Terms in Art*.

**ARCHAISM.** The term employed in art, to express the presence of a strong feeling for an early or archaic mode of representation. It is usually confined to representations of the human figure in sculpture or painting.

**ARCHANGEL.** A minister, messenger, or ambassador of God; a member of the eighth choir of the Celestial Hierarchy of Dionysius the Areopagite. (See *Angel*.)

Seven angels are spoken of in Scripture\* as standing in the presence of God.

“The Seven  
Who in God’s presence, nearest to the throne,  
Stand ready at command.”—*Milton*.

These have been commonly designated the archangels, being more exalted than the rest of the heavenly host; and, although they have not been definitely named by Christian writers, they are occasionally found represented together in works of art.

The Jews, who recognised the existence and operation of seven spirits, gave the following names to the seven angels:—Uriel, Jophiel, Zadkel, Kamiel, Raphael, Michael, and Gabriel. Some confusion now arises if we call these *Archangels*, because, according to certain Christian authorities, these beings rule over seven of the choirs of the heavenly hierarchy, and two others are introduced—Zaphkiel and Haniel—to complete the chiefs of the nine choirs. Of the entire number only one is, strictly speaking, an archangel, namely, Michael, the chief of the choir of Archangels.† The confusion disappears, however, if we set aside the division of Dionysius, and speak of the heavenly host as simply divided into two orders, Angels and Archangels; then all the chiefs, seven or nine, as may be accepted, are archangels, being rulers over the angels.

In works of art we meet with the seven angels of the Apocalypse with their trumpets; or, in representations of the Crucifixion, seven angels bearing emblems of the Passion. Four of them, however, are much more frequently depicted than the entire seven; these are Michael, Gabriel, Raphael, and Uriel. Fine renderings of these are to be found in the cathedral of Monreale, near Palermo. On an ivory shrine, preserved in the Hôtel de Cluny, Paris, the four are depicted; three have their usual names inscribed, SS. Michael, Gabriel, and Raphael; Uriel (although in this instance the chief of the second choir may be intended) is called St. Cherubin.

For further particulars see *Angel*, and the articles under the respective names of the angels above enumerated.

**ARCH-BAND.** The term occasionally employed by English architects to designate that portion of a transverse arch or main rib which appears below the general surface of a vault. The term is, however, neither

\* Rev. viii. 2, 6; xvi. 1.

† Jude 9; 1 Thess. iv. 16.



expressive nor satisfactory from any point of view. The French architects, who are, generally, better provided with professional terms than we are, use the word *ARC-DOUBLEAU* to designate this feature.\*

**ARCH-BRICK.** A brick cut or moulded in a wedge-form, and used in the construction of an arch.

In this country, when the brick is of an ordinary soft quality, and to be used in its quadrangular shape, it is usually cut or rubbed to the radiating lines of the arch; but when ornamental work and elaborate mouldings are required, the arch-bricks are generally moulded in the exact form required. In work, however, executed in the fine and very soft red brick, now so largely used by architects in London and elsewhere, the mouldings of arches are invariably cut in the arch-bricks either before or after they are built in the walls.

In the architecture of North Italy numerous examples of richly-moulded arch-bricks are to be met with; these are sometimes associated with voussoirs of stone in the plainer portions of the work. They are moulded of various sizes to suit the different members of the arches. Fine examples exist in the Broletto, at Brescia; the campanile of the church of St. Andrea, at Mantua; the cathedral of Cremona; and the church of St. Francesco, at Pavia. We have confined ourselves to the above examples, because our readers can readily find illustrations of them by referring to Mr. G. E. Street's interesting work, *Brick and Marble in the Middle Ages*.† The brick architecture of Germany also presents good specimens of moulded arch-bricks.

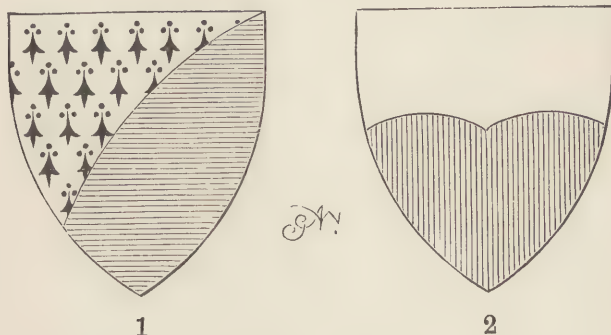
**ARCH-BUTTANT OR ARCH-BUTTRESS.** Old terms for what is now commonly called a flying-buttress. Sir Christopher Wren uses the term *ARCH-BUTTRESS* in his Westminster abbey Report (1713) thus:—"Nothing was thought magnificent that was not high beyond measure with the flutter of arch-buttresses; so we call the sloping arches that poise the higher vaultings of the nave." We meet with the term *ARCHIBOTANT* in the account for the herce of Queen Anne, in St. Paul's, London (1394); and the chronicler Hall, in his description of the pageants on the entrance of Charles the Fifth into London (1522), uses the term *ARCHES-BUTTAND*. The term now used by the French architects is *ARC-BOUTANT*.

\* "*ARC-DOUBLEAU*.—Arc saillant d'un berceau de voûte qui, jeté transversalement d'une naissance à l'autre du berceau, le divise en compartiments. Les arcs-doubleaux étant destinés à renforcer une voûte, sont appareillés avec soin; dans les voûtes en petits matériaux, ils sont toujours d'un plus grand appareil que le reste. Cet arc doit son nom à la fonction qu'il remplit, c'est-à-dire qu'il a pour objet de doubler la voûte; disons aussi qu'il n'est souvent destiné qu'à la décorer: dans ce cas il est orné de sculptures. On peut voir des arcs-doubleaux dans ces conditions à l'église des Invalides de Paris. Dans les églises du moyen âge, les arcs-doubleaux remplissent le même office que les nervures; ils sont appareillés et profilés de même."—*Dict. rais. d'Arch.*, E. Soc.

† John Murray; London, 1855.

**ARCHED.** Spanned or covered by an arch: the word prefixed to certain architectural terms to denote that the ordinary conditions of the objects alluded to are modified by their being formed in the shape of an arch.

**ARCHED OR ENARCHED.** The term used in heraldry to denote the line which parts the field of a shield in the manner shown in Fig. 1. (Example—*Party per bend sinister, arched, azure and ermine.*) The line is **DOUBLE-ARCHED** when as in Fig. 2. (Example—*Party per fesse, double-*



*arched, argent and gules.*) These lines may part or divide the field in the several directions and positions acknowledged in heraldry; or bound the several ordinaries.

**ARCHEION.** (*Gr.*) Ἀρχεῖον literally signifies a public place or seat of justice belonging to the magistrates of a Grecian city; but it appears to have been commonly employed to designate a state record office, where the archives and decrees of the government and other important public documents were preserved. The term was directly applied to the temple of the Mother of the Gods, at Athens, in which the archives were kept, under the charge of the President of the Senate of the Five-hundred.

**ARCHIA.** The late Latin term signifying the arch of a bridge.

**ARCHIEPISCOPAL PALACE.** The palatial dwelling of an archbishop. (See *Episcopal Palace.*)

**ARCHISTERIUM.** A late Latin word, and probably a corruption of the word *ASCETERIUM*, signifying a monastic cell.

**ARCHITECT.** The term derived from the two Greek words ἀρχός, chief, and τέκτων, an artificer or artist; and signifying, accordingly, a chief designer, artificer, or artist.

In the early epochs of architecture the architect was not altogether



distinct from the builder; he was practically the master-builder, working with and directing the inferior workmen placed under his orders. The architect, in turn, received his instructions from his master, either king or priest, to whom he was responsible for the proper execution of all departments of the work entrusted to his care. The fact that the architect, wonderfully talented and skilled though he must in many cases have been, was not practically separated from the mass of artificers employed, doubtless accounts for his name not having been recorded on his buildings. In the temples of Egypt the names of the kings in whose reigns they were erected are repeatedly inscribed, but we are not aware of one instance in which the chief workman's name is recorded; nor are we aware of a painting having been discovered in any of the tombs in which an architect is depicted; scenes, however, appear in which ordinary workmen, masons, sculptors, polishers, and painters are represented occupied in their respective arts. In a representation of a painting, found in a grotto at Dayr E'Shake, near El Bersheh, of the transportation of a colossus from the quarries, given in Sir J. Gardner Wilkinson's *Manners and Customs of the Ancient Egyptians*,<sup>1</sup> a single figure is shown standing upon the knee of the statue, and apparently directing the proceedings. This may probably have been intended to represent the architect under whose directions the colossus was sculptured, or the chief engineer under whose instructions it is being transported. That responsible persons were employed for such tedious and difficult tasks is proved by Pliny, who tells us that Rameses had a large obelisk made, and being afraid that the chief engineer would probably not take sufficient care to proportion the lifting power of his machinery to the great weight of the monolith, he ordered his son to be bound to its apex during its elevation, to secure extraordinary precautions being taken. In temple building, the true architects were doubtless priests, specially skilled and trained, under whose instructions the master-builders carried out the works. Architecture was unquestionably a religious art during all the temple-building periods in Egypt.

The first architect whose name is recorded is Bezaleel, the man endowed by God with special wisdom, understanding, and knowledge in all manner of workmanship, to act as chief in the construction of the tabernacle in the wilderness.<sup>2</sup>

Notwithstanding the great minuteness with which the building of Solomon's temple is described, no architect's name is given; a chief of the officers which were over the work is, however, alluded to,<sup>3</sup> and he it was who doubtless acted as master-builder under Solomon's personal instructions. The absence of an architect's name is more remarkable, seeing that the name of a master-worker in brass is given, Hiram of Tyre.<sup>4</sup> Solomon was most probably the sole architect of his temple, and merely employed master-workmen skilled in their several callings to superintend the different

<sup>1</sup> New Edition, vol. ii., p. 305. Murray, 1878.

<sup>2</sup> Exod. xxxi. 2. <sup>3</sup> 1 Kings v. 16. <sup>4</sup> 1 Kings vii. 13.

departments of the works. Hiram, or Hiram as spelt in the Chronicles, has commonly been considered the architect of the temple, but we scarcely think the text authorises such a conclusion. In Kings he is mentioned after the structure of the temple is described, being sent for as a man "filled with wisdom, and understanding, and cunning to work all works in brass;<sup>1</sup>" his father was also a worker in brass. In Chronicles—Solomon sends for "a man cunning to work in gold, and in silver, and in brass, and in iron, and in purple, and crimson, and blue, and that can skill to grave with the cunning men"<sup>2</sup> that are in Judah and Jerusalem.

Little is known of the early Greek architects. Pausanias mentions the first two of whom there is any historical record,<sup>3</sup> Trophonius and Agamedes. They are stated to have built the renowned fourth temple of Apollo at Delphos, the temple of Neptune near Mantinea, and a temple of Apollo, in a wood, near the city of Livadea, in Bœotia. Both are said to have been the sons of Erginus, king of Orchomenos, in Bœotia; and if not brothers, were certainly very intimate friends, passing their life together.<sup>4</sup> The next architect is mentioned by Diodorus Siculus,<sup>5</sup> Dædalus, an Athenian of royal descent. His works are described as numerous in Greece, Egypt, Italy, and Sicily; but his most famous one was the labyrinth in the island of Crete. He is also reputed the architect of the temple of Apollo at Capua, and the temple of Britomartis; according to Diodorus, he was the architect of Agrigentum, and a palace for Cocalus, king of Sicily. The date of his labours appears uncertain; Milizia gives 1250 B.C., whilst others fix dates to as late as the tenth century B.C.

The following are the names and works of the more important architects who lived prior to the Christian era as recorded by ancient authors:—

HERMOGENES. Architect of Alabanda, who constructed the temple of Bacchus, at Teos, and that of Diana, at Magnesia. He is thus spoken of by Vitruvius with reference to temple architecture:—"There is no example of eustylos in Rome; but there is one at Teos, in Asia, which is octastylos, and dedicated to Bacchus. Its proportions were discovered by Hermogenes, who was also the inventor of the octastylos or pseudodipteral formation. It was he who first omitted the inner ranges of columns in the dipteros, which being in number thirty-eight, afforded the opportunity of avoiding considerable expense."<sup>6</sup> There appears to be no idea as to the time in which this architect lived. Gwilt places him in the seventh century, and Sullivan in the second century before Christ.<sup>7</sup> Milizia places him fifth in his list, but says—"we know not at what precise time this architect lived;" and Vitruvius gives no dates.

<sup>1</sup> 1 Kings vii. 14. <sup>2</sup> 2 Chron. ii. 7. <sup>3</sup> Pausanias, lib. ix., cap. 37.

<sup>4</sup> Francesco Milizia—*The Lives of Celebrated Architects*. London, 1826.

<sup>5</sup> Diodorus Siculus, lib. iv., cap. 5. <sup>6</sup> Vitruvius, lib. iii., cap. 2.

<sup>7</sup> *The Building News*, Sep. 16, 1859. A table of Architects and their works, &c., by Francis Sullivan.



**CTESIPHON.**<sup>1</sup> The architect who designed and commenced the construction of the sixth temple of Diana, at Ephesus.<sup>2</sup> He is mentioned by Vitruvius as a man of considerable inventive powers in addition to his artistic skill as an architect; and as an author, in conjunction with his son, of a treatise on the Ionic order in their great temple at Ephesus.

**METAGENES.** The son of Ctesiphon, and the architect who assisted in the construction of the temple of Diana.

**PÆONIUS.** An Ephesian, under whose directions, aided by one Demetrius, a priest of Diana, the temple of Diana was completed. He also designed the temple of Apollo, at Miletus.

**DAPHNIS.** A Milesian architect who is stated to have assisted Pæonius in the construction of the temple of Apollo, at Miletus.

**THEODORUS and RHÆCUS.** The reputed architects of the temple of Juno, in Samos. Vitruvius states that Theodorus wrote a treatise on this Doric temple.

**EUPALINUS.** Constructed the celebrated aqueduct at Samos, described by Herodotus.

**MEMNO.** Architect of the palace of Ecbatana, built for Cyrus, king of Persia.

**SPINTHARUS.** An architect of Corinth, who erected the fifth temple of Apollo, at Delphos.

**CHRISOPHUS.** According to Pausanias, was an architect of Crete, who constructed several temples at Tegea, amongst which were those dedicated to Apollo, the Paphian Venus, and to Ceres and Proserpine.

**EUPOLEMUS.** Architect of Argos, who erected the temple of Juno, at Eubœa, described by Pausanias.<sup>3</sup>

**TARCHESIUS.** An architect who, according to Vitruvius, wrote a treatise against the use of the Doric Order, because false and incongruous arrangements arose in the use of it.

**ARGELIUS.** The reputed architect of the temple of Aesculapius, at Tralles, in Asia Minor. Vitruvius informs us that he wrote a treatise on the proportions of buildings of the Corinthian Order, the adoption of which he advocated; and also a work on his own Ionic temple at Tralles.

**ANTISTATES, CALLESCHRUS, ANTIMACHIDES, and PORINUS.** Were four architects employed by Pisistratus to erect the temple of Zeus Olympius, at Athens; which was left unfinished at his death. About four hundred years after, Perseus, king of Macedonia and Antiochus Epiphanes, having agreed to supply the money for the work, "a Roman citizen, named

<sup>1</sup> Pliny calls him Chersiphron.

<sup>2</sup> The names of the architects of the earlier temples have not been handed down to us. "The sixth temple was built on a different site to the former temples. Its foundations were laid by Theodorus about 500 B.C., and the erection commenced about 460 B.C., by Ctesiphon and Metagenes. . . . The first-named architect is praised by Pliny for the admirable construction evinced in his work."—E. Falkener. *Ephesus and the Temple of Diana*. London, 1862.

<sup>3</sup> Pausanias, lib. viii., cap. 10.

COSSUTIUS, designed with great skill and taste the cell, the dipteral arrangement of the columns, the cornices, and other ornaments."<sup>1</sup> The architects employed by Pisistratus laid the foundations of the temple about the year 540 B.C.

AGAPTOS. According to Pausanias, was the architect who originated the porticoes round the squares attached to the Greek stadii, and whose name was afterwards honorably associated with such porticoes.

PHEACES. This architect, who is believed to have lived about 500 B.C., is stated by Diodorus Siculus to have erected several important buildings in Sicily, and particularly at Agrigentum. It is considered probable that the temple of Zeus, at Agrigentum, was built under his directions.

HIPPODAMUS. An architect of Miletus, who constructed the fortifications of the Piræus, at Athens, about the year 475 B.C. Vitruvius does not mention this architect, but informs us that one Philo wrote a treatise on the arsenal at the Piræus.<sup>2</sup>

CALLICRATES and ICTINUS. The two architects engaged by Pericles (464-430 B.C.) to erect the Parthenon, on the Acropolis at Athens. Vitruvius states that Ictinus and Carpio wrote on the Doric temple of Minerva, on the Acropolis.<sup>3</sup> It is considered probable that Ictinus also erected the temple of Apollo Epicurius, near Phigaleia.

LIBO. The architect of the temple of Zeus Olympius, at Elis, commenced about the year 444 B.C. In this temple was placed the celebrated statue of Zeus, by Phidias, executed in gold and ivory. (See *Application*.)

MNESICLES. The architect employed by Pericles to construct the Propylæa, or vestibule to the citadel of Athens. This magnificent work was commenced in 437 B.C., and completed in about five years.

CARPIO. An Athenian architect. It is not known that he assisted Callicrates and Ictinus in the erection of the Parthenon, but Vitruvius says that he wrote an architectural treatise on the building. He therefore, in all probability, lived about the time of its completion.

CORÆBUS and METAGENES XYPETIUS. These architects lived at the same time as Mnesicles, and they are believed to have constructed the temple of Initiation, at Eleusis.

POLYCLETUS. According to Pausanias, the architect who built a rotunda and theatre at Epidaurus. He says the latter "is of singular beauty. The theatres of Rome surpass all others in magnificence and ornament, as well as in size, without excepting that of Megalopolis, near Arcadia; but for elegance and symmetry, that of Polycletus may dispute the palm."<sup>4</sup>

ANISTATES. An Athenian architect who erected a temple of Zeus, at Athens.

SCOPAS. A celebrated sculptor and architect who built the temple of Pallas at Tegea, about 362 B.C. He is also stated to have assisted in the erection of the seventh temple of Diana, at Ephesus, which was burnt by

<sup>1</sup> Vitruvius, Intro. lib. vii.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid.

<sup>4</sup> F. Milizia.

Herostratus in 356 B.C. He also designed one front of the celebrated Mausoleum, at Halicarnassus.

PYTHIUS and SATYRUS. Constructed portion of the great Mausoleum, at Halicarnassus, about 350 B.C.; and, according to Vitruvius, wrote a treatise on the building. Pythius constructed the temple of Minerva, at Priene.

DINOCRATES. An architect of Macedonia, who was engaged in founding the city of Alexandria (323 B.C.), a work of very great importance. He is also the reputed author of the scheme, submitted to Alexander, to form Mount Athos into the statue of a man holding a city in one hand and a vase in the other, through which latter all the streams of the mountain were to fall into the sea.<sup>1</sup>

ADRONICUS CYRRHESTES. Architect of Macedonia, who erected in Athens the well-known tower of the Winds. The date at which he lived has not been decided.

SOSTRATUS. Architect of Gnidus, who erected the celebrated Pharos of Alexandria.

HERMODORUS. Architect of Salamis, who erected the temple of Jupiter Stator, in the Forum, and that of Mars, in the Circus Flaminius, at Rome.

COSSUTIUS. A Roman architect, employed by Perseus, king of Macedonia, and Antiochus Epiphanes to construct additions to the temple of Zeus Olympius, at Athens, about 180 B.C.

PHILO. Architect of Byzantium, who superintended the enlargement of the Piræus, at Athens; and rebuilt the great theatre, under Hadrian. He also wrote treatises on architecture.

CAIUS MUTIUS. A Roman, who constructed the temple of Honour and Virtue, near the trophies of Marius, at Rome.

SAURUS and BATRACHUS. Architects of Laconia, who erected the temples enclosed by the portico of Octavia, at Rome. They lived in the early years of the first century B.C. Certain remains of their work are supposed to exist in the churches of St. Lorenzo and St. Eusebius, at Rome, being sculptured with a lizard and frog in allusion to their respective names (*σαυρος*, a lizard; *βατραχος*, a frog).

VALERIUS. An architect of Ostia, and one of the most celebrated of his time. He is believed to have been largely employed, but records of his buildings have not come down to us. Pliny informs us that he was the inventor of the method of covering the theatres resorted to when Libo the Edile entertained the Romans with spectacles therein.

L. COCCEIUS AUCTUS. A Roman architect, who executed several important works, among which were a temple at Pozzuoli, the Grotta della Sibella, constructed from Lacus Avernus to Baiæ, and the subterranean gallery of Cumæ.

FUSSITIUS. Architect of several buildings in Rome, and the earliest Roman author who wrote on the subject of architecture. Vitruvius says he produced an excellent work on the subject.

<sup>1</sup> Vitruvius, Intro, lib. ii.



MARCUS VITRUVIUS POLLIO. Architect of Fano, and author of the only antique treatise on architecture which has been preserved to us, and from which we learn the names and works of several of the architects in the above list. He built, as he records in his treatise, a basilica in the Julian colony of Fano, and, further, gives a description of the building.<sup>2</sup> The exact time at which he lived has not been decided, but his dedication appears to point to Augustus, and that would place him about the end of the first century B.C. Gwilt remarks:—"It is likely that the treatise was composed when he was advanced in life, and that it was presented to his patron after he had assumed the title of Augustus, that is, twenty-five years before the Christian era, inasmuch as he speaks of a temple erected to Augustus in his Basilica at Fano. He was, as may be collected from his writings, by no means a successful professor, though well born and well educated, and certainly, notwithstanding the common sophisms of his age which appear in his work, a man of no ordinary talent. He was no less a military than a civil architect, as may be gathered from the introduction to his first book, as well as from the rules, now incomprehensible, but doubtless in his time sufficiently clear, laid down in the tenth book respecting military engines. From the introduction to the third book we learn, that he was small of stature, and lived to some age. That he should have met with opposition from his brethren is quite consonant with later experience, for the rabble of ignorant builders, and artisans, and draftsmen, who in the present day call themselves architects, and meet with considerable patronage, are of the same class as those that flourished subsequently to the time of our author, even in the time of Michael Angelo da Buonarrotti."\*

That the great architects of antiquity were men highly cultivated in all matters relating to their art there can be no question, for their works have commanded the admiration of all subsequent ages, and have been ardently studied by all who have since become distinguished artists in the styles of architecture they represent; but that even the greatest architects came up to the standard given by Vitruvius may reasonably be doubted. As this article is devoted to the consideration of what is correctly signified by the term *Architect*, we cannot do better than quote the words of Vitruvius on the subject:—

"Architecture is a science arising out of many other sciences, and adorned with much and varied learning; by the help of which a judgment is formed of those works which are the result of other arts. Practice and theory are its parents. Practice is the frequent and continued contemplation of the mode of executing any given work, or of the mere operation of the hands, for the conversion of the material in the best and readiest way. Theory is the result of that reasoning which demonstrates and explains that the material wrought has been so converted as to answer the end proposed. Wherefore the mere practical architect is not able to assign sufficient reasons for the forms he adopts; and the theoretic architect also fails,

\* Gwilt's Vitruvius, Intro., p. xii.

grasping the shadow instead of the substance. He who is theoretic as well as practical, is therefore doubly armed; able not only to prove the propriety of his design, but equally so to carry it into execution. In architecture, as in other arts, two considerations must be constantly kept in view; namely, the intention, and the matter used to express that intention: but the intention is founded on a conviction that the matter wrought will fully suit the purpose; he, therefore, who is not familiar with both branches of the art, has no pretension to the title of architect. An architect should be ingenious, and apt in the acquisition of knowledge. Deficient in either of these qualities, he cannot be a perfect master. He should be a good writer, a skilful draughtsman, versed in geometry and optics, expert at figures, acquainted with history, informed on the principles of natural and moral philosophy, somewhat of a musician, not ignorant of the sciences both of law and physic, nor of the motions, laws, and relations to each other, of the heavenly bodies. By means of the first named acquirement, he is to commit to writing his observations and experience, in order to assist his memory. Drawing is employed in representing the forms of his designs. Geometry affords much aid to the architect: to it he owes the use of the right line and circle, the level and the square; whereby his delineations of buildings on plane surfaces are greatly facilitated. The science of optics enables him to introduce with judgment the requisite quantity of light, according to the aspect. Arithmetic estimates the cost, and aids in the measurement of the works; this, assisted by the laws of geometry, determines those abstruse questions, wherein the different proportions of some parts to others are involved. Unless acquainted with history, he will be unable to account for the use of many ornaments which he may have occasion to introduce. . . . Moral philosophy will teach the architect to be above meanness in his dealings, and to avoid arrogance: and will make him just, compliant, and faithful to his employer; and, what is of the highest importance, it will prevent avarice gaining an ascendancy over him: for he should not be occupied with the thoughts of filling his coffers, nor with the desire of grasping everything in the shape of gain, but, by the gravity of his manners, and a good character, should be careful to preserve his dignity. In these respects we see the importance of moral philosophy; for such are her precepts. That branch of philosophy which the Greeks call *φυσιολογία*, or the doctrine of physics, is necessary to him in the solution of various problems; as, for instance, in the conduct of water, whose natural force, in its meandering and expansion over flat countries, is often such as to require restraints, which none know how to apply, but those who are acquainted with the laws of nature; nor, indeed, unless grounded in the first principles of physics, can he study with profit the works of Ctesibius, Archimedes, and many other authors who have written on the subject. Music assists him in the use of harmonic and mathematical proportion. . . . Skill in physic enables him to ascertain the salubrity of different tracts of country, and to determine the variation of climates, which the Greeks call *κλίματα*: for,



the air and water of different situations being matters of the highest importance, no building will be healthy without attention to those points. Law should be an object of his study, especially those parts of it which relate to party-walls; to the free course and discharge of the eaves' waters, the regulations of sesspools and sewage, and those relating to window lights. . . . Contracts, also, for the execution of the works, should be drawn with care and precision: because, when without legal flaws, neither party will be able to take advantage of the other. Astronomy instructs him in the points of the heavens, the laws of the celestial bodies, the equinoxes, solstices, and courses of the stars; all of which should be well understood, in the construction and proportions of clocks. Since, therefore, this art is founded upon and adorned with so many different sciences, I am of opinion that those who have not, from their early youth, gradually climbed up to the summit, cannot without presumption, call themselves masters of it. . . . Pythius, one of the ancients, architect of the noble temple of Minerva at Priene, says, in his Commentaries, that an architect should have that perfect knowledge of each art and science which is not even acquired by the professors of any one in particular, who have had every opportunity of improving themselves in it. This, however, cannot be necessary; for how can it be expected that an architect should equal Aristarchus as a grammarian, yet should he not be ignorant of grammar. In music, though it be evident he need not equal Aristoxenus, yet he should know something of it. Though he need not excel as Apelles, in painting, nor as Myron or Polyclethus, in sculpture, yet he should have attained some proficiency in these arts. So, in the science of medicine, it is not required that he should equal Hippocrates. Thus also, in other sciences; it is not important that pre-eminence in each be gained, but he must not, however, be ignorant of the general principles of each. For in such a variety of matters, it cannot be supposed that the same person can arrive at excellence in each, since to be aware of their several niceties and bearings cannot fall within his power. We see how few of those who profess a particular art arrive at perfection in it, so as to distinguish themselves: hence, if but few of those practising an individual art obtain lasting fame, how should the architect, who is required to have a knowledge of so many, be deficient in none of them, and even excel those who have professed any one exclusively. Wherefore Pythius seems to have been in error, forgetting that art consists in practice and theory. Theory is common to, and may be known by all, but the result of practice occurs to the artist in his own art only."\*

Such are the ideas of Vitruvius on the accomplishments requisite for an architect; and they clearly point to the responsible and exalted position held by the great architects of antiquity. The architects of Greece and Rome were the friends and honoured guests of Emperors, and were men highly valued as national benefactors: distinguished honours were, however, not confined to the architects of antiquity alone, for in a letter, still

\* Gwilt's translation of Vitruvius. Lib. i., cap. 1.



existing, from Theodoric, king of the Ostrogoths (493-525 A.D), to Simmachus, the architect of his palace, he terminates his instructions with promises of honourable treatment and public recognition; assuring Simmachus that, in proof of his high confidence and appreciation, he shall stand next his royal person in all processions and receptions, with a golden wand of office in his hand, and surrounded by a numerous cortège.

In the previous list we have briefly mentioned the more important architects who lived prior to the Christian era, and whose names and chief works have been recorded, omitting those about whom we know absolutely nothing beyond their names; with reference to dates, we have felt it our duty to be cautious where the elements of doubt were too strong to be overcome by any research. The following few names of those who lived during the first three centuries of the Christian era practically complete the list of pagan architects.

#### FIRST CENTURY AFTER CHRIST.

**VITRUVIUS CERDO.** An architect of Verona, who erected in that city an arch of triumph, for the Gavii family. His name was found inscribed on the arch thus:—*L. VITRUVIUS L. L. CERDO ARCHITECTUS*. He probably lived in the opening years of the century.

**CELER and SEVERUS.** Were the architects employed by Nero, after the burning of Rome, to construct his celebrated palace, which, from the magnificence of its decorations, was called the "golden house" (54-68).

**RABIRIUS.** According to Martial, one of the most accomplished architects of his time. He was largely employed by Domitian, for whom he constructed the palace on the Palatine hill. Rabirius also designed some temples and arches of triumph in Rome; and appears also to have been a skilful engineer.

**MUSTIUS.** Architect of Rome, in which city he erected a temple to Ceres, and other public edifices.

**JULIUS FRONTINUS.** It is not certain that he was an architect by profession, though his knowledge of architecture must have been considerable. He was inspector and superintendent of the Roman aqueducts under Nerva; and his work on aqueducts is still preserved to us.

#### SECOND CENTURY.

**APOLLODORUS.** A native of Damascus, who, on account of his great talents, was largely employed by Trajan. He constructed the forum of Trajan, the great column of Trajan. "Apollodorus built a college, a theatre appropriated to music, the basilica Ulpia, a celebrated library resembling that so much enriched by Domitian on the Palatine, the baths of Trajan, temples, roads, aqueducts, and other considerable edifices in Rome, in Italy, and in the provinces of the Roman empire. The Circus Maximus, which was re-established, enlarged, and ornamented by Trajan, is also believed to have been under the direction of Apollodorus, who was concerned in almost all the noble edifices erected under that emperor; but

the most noted work was the bridge over the Danube, in Lower Hungaria, near Zeverino." \*

**CAIUS JULIUS LACER.** An architect of Rome, who practised in the time of Trajan. He constructed several works in Spain, amongst which were a small temple, in the province of Alcantara, and a magnificent bridge, with an arch of triumph on it, over the river Tagus. The bridge measured 670 feet long by 200 feet high from the water level; it was designed with six arches of 84 feet span springing from massive piers 28 feet in width. The whole structure was in stone. The temple is said to be still in existence, but is now dedicated to St. Giuliano. All these structures were originally dedicated to Trajan.

**DETRIANUS.** Architect of Rome, who was employed by Hadrian on many important works carried out in his time in the imperial city. Milizia says:—"This architect restored the Pantheon, the Basilica of Neptune, the Forum of Augustus, the Baths of Agrippina, and many other edifices that had been burnt or destroyed. He also erected a magnificent temple dedicated to Trajan; but his most conspicuous work was that vast structure the sepulchre of Hadrian, and the bridge *Ælius*, now that of St. Angelo. It was ornamented with a high covering of brass, supported by 42 columns, terminated at the top by as many statues."

Amongst other clever things ascribed to Detrianus was the transportation of the bronze colossus of Nero. This statue is reputed to have been one hundred and twenty feet high; and a great number of elephants are said to have been employed to move it.

Several other architects must have been engaged by Hadrian, in the various provinces of the empire, but their names have not been preserved; even the architect of his magnificent villa at Tivoli is not known.

**ANTONINUS.** A senator of Rome, and a skilful architect. He constructed the Pantheon at Epidaurus, and other temples to Apollo and Aesculapius. He also built the baths of Aesculapius, and some lesser works.

This architect is the last of any eminence amongst the ancients whose name has been handed down to us. Although in the reigns of Septimius Severus, Caracalla, Diocletian, and Maxentius, several important buildings were erected, none of the names of their designers have apparently been preserved. We may, therefore, take leave of the ancient architects, and direct our attention to those who have been recorded as the designers of early Christian and mediæval structures.

Of the earlier Christian architects very little is known; and, indeed, only a few of their names have been recorded in a way to reach our time.

**METRODORUS.** The first architect under Constantine whose name has been handed down; he was a native of Persia,† and is stated to have practised in India before he visited Constantinople. He was in all probability largely employed by Constantine, but his name has not been

\* F. Milizia, vol i., p. 94.

† Cedrenus Hist. Compend.



identified with any known building. The architect of the great basilica of St. Peter, at Rome (erected about A.D. 330), is not known, but he was in all probability a native of Rome, familiar with the earlier forms of basilicæ.

We are told that Constantine, at the commencement of his building operations, found the arts rapidly declining, and lamented the want of architects endowed with skill sufficient for his requirements. So much impressed was he with the necessity for properly trained and qualified architects to be forthcoming, for the well-being and progress of the arts of peace in his empire, that he issued orders to the magistrates of the distant provinces to establish institutions, under proficient professors, wherein educated, intelligent, and ingenious youths, incited to emulation by prizes and privileges, might obtain the education necessary to qualify them as architects. This injunction is dated A.D. 334, and is addressed to the prefect of Italy, whose jurisdiction was widely spread.

ALYPIUS. The next architect which history mentions; he cannot, however, be correctly classed amongst the Christian architects. Having been employed by Julian the Apostate, it is probable that he was neither a Christian nor the designer of any buildings for Christian worship. Julian was so antagonistic to the religion of the Cross, that, with a view to render false the prophecy of our Lord, with reference to the temple of Jerusalem, he encouraged the Jews to undertake the reconstruction of that edifice; and, further, he is stated to have ordered Alypius to superintend the work. Legendary history states that the undertaking was arrested by divine interposition; and that the workmen were destroyed by an outbreak of supernatural flames in the foundations.

CYRIADES. According to Milizia, he was an architect "honoured with the consular dignity, and, from his knowledge in architecture and mechanics, was employed by the emperor Theodosius in the construction of a new basilica and a bridge, the situation of which is not known. In the building of the latter he evinced a disposition to avarice, which should never belong to an architect; he was accused of not forwarding the work, and of not giving it the proper solidity; the direction of the buildings was therefore given to his accuser Auxentius, also a senator; but Cyriades raised so powerful a party against him, that he was obliged to abandon the work. Symmachus, the prefect, well versed in architecture, was then ordered by the emperor to inquire into the affair. He began by reviewing the accounts of Cyriades; and that the building of the bridge might not be interrupted, he gave the care of it to Afrodisius, consul and tribune, and well deserving the confidence reposed in him."

We have here three architects, all of whom were honoured with consular dignity, a fact which clearly proves the high position in society which reputable members of the profession held in the latter part of the fourth century. It appears doubtful whether Symmachus, the prefect, was strictly an architect; we are rather disposed to believe him to have been appointed by Theodosius as a legal referee and auditor of the building



accounts of Cyriades, with power to appoint another architect to complete the work in question.

The great basilica of St. Paul was commenced in the reign of Theodosius (about A.D. 387), but the name of its architect has not been recorded; it is probable that Cyriades may have been its designer, and that it was the basilica he is stated to have built for the emperor.

ALOISIUS. An architect employed by Theodoric to restore several of the important buildings in Rome. He was probably the man alluded to in the formula, sent by Theodoric to the prefect of Rome, on the architecture of the public edifices of that city. This interesting document, given by Cassiodorus,\* is translated in Milizia's *Lives of Celebrated Architects*. It runs as follows:—

“The beauty of the Roman buildings requires a skilful overseer, in order that such a wonderful forest of edifices should be preserved with constant care, and the new ones properly constructed, both internally and externally. Therefore we direct our generosity not only to the preservation of ancient things, but to the investing the new ones with the glories of antiquity. Be it known, therefore, to your illustrious person, that for this end an architect of the Roman walls is appointed. And because the study of the arts requires assistance, we desire that he may have every reasonable accommodation that his predecessors have enjoyed. He will certainly see things superior to what he has read of, and more beautiful than he could ever have imagined. The statues still feel their renowned authors, and appear to live: he will observe expressed in the bronze, the veins, the muscles swoln by exertion, the nerves gradually stretched, and the figure expressing those feelings which act on a living subject. It is said that the first artists in Italy were the Etruscans, and thus posterity has given to them, as well as to Rome, almost the power of creating man. How wonderful are the horses, so full of spirit, with their fiery nostrils, their sparkling eyes, their easy and graceful limbs! they would move if not of metal. And what shall we say of those lofty, slender, and finely fluted columns, which appear a part of the sublime structure they support? That appears wax, which is hard and elegant metal; the joints in the marble being like natural veins. The beauty of art is to deceive the eye. Ancient historians acquaint us with only seven wonders in the world: the temple of Diana at Ephesus; the magnificent sepulchre of the king Mausolus, from whence is derived the word *mausoleum*; the bronze colossus of the sun in Rhodes; the statue of Jupiter Olympius, of gold and ivory, formed by the masterly hand of Phidias, the first of architects; the palace of Cyrus, king of Media, built by Memnon of stones united by gold; the walls of Babylon, constructed by Semiramis of brick, pitch, and iron; the pyramids of Egypt, the shadows of which do not extend beyond the space of their construction. But who can any longer consider these as wonders, after having seen so many in Rome? Those were famous because they preceded us; it is natural that the new productions of the then barbarous ages should be renowned. It may truly be said that all Rome is wonderful. We have, therefore, selected a man clever in the arts, who, in seeing so many ingenious things of antiquity, instead of remaining merely enchanted with them, has set himself to investigate the reason, study their books, and instruct himself, that he may become as learned as those in the place of whom he is to consider himself appointed.”

Aloisius is believed, in conjunction with another skilful architect named

\* Cassiod., lib. vii. Varior. Form.

Daniel, to have constructed the *Rotonda* or mausoleum of Theodoric, at Ravenna, in the king's lifetime. This interesting building, which originally held the remains of Theodoric, was despoiled of its coffin and ornaments on the expulsion of the Arians. It still exists under the name of St. Maria Rotonda. The most remarkable feature of the building is its dome, which is formed of a single stone, about thirty-six feet in diameter and fifteen feet thick, hollowed out internally to the height of about ten feet. This feature, unique in the entire range of domical architecture, is quite enough to stamp its architect as a man of marvellous capability and great mechanical skill.

BOETHIUS, SYMMACHUS, and CASSIODORUS. Great literary men, who also appear to have been devoted to the study of architecture. Cassiodorus, in his writings, informs us that Theodoric was so much gratified with the labours of Symmachus, in Rome, that he thus wrote to him:—"You have constructed fine edifices; and you have also disposed them with such wisdom that they equal those of antiquity and serve as examples to the modern builders; and all that you show unto us is a perfect image of the excellence of your own mind, because it is not possible to build correctly without the exercise of good sense and a highly cultivated understanding." Cassiodorus was Theodoric's secretary of state, and it is believed that he designed and superintended numerous buildings for the king, as well as a monastery near Squillace, which he erected at his own expense, and to which he retired at the close of his public career. He was evidently a man of high artistic acquirements, as numerous passages in his writings testify. Boethius was one of the most remarkable men of his time, and was noted for all the virtues; he was for a long period the valued counsellor of his sovereign, and the man most beloved by the people. In addition to architecture, he studied the sciences and devoted many leisure hours to the construction of philosophical and musical instruments. He wrote Latin translations of old Greek philosophical and mathematical authors, and an original work on the *Consolations of Philosophy*. Alas for human greatness and the favour of princes! both he and Symmachus fell under the unjust suspicions of Theodoric, and were put to death. The remorse which seized the king after the barbarous act is believed to have caused the serious illness which terminated in three days with his death (A.D. 526).

ANTHEMIUS. The chief architect of Justinian, and the master in art to whom the great church of St. Sophia, at Constantinople, owes its creation. In this wonderful work, Christian architecture took an entirely new development, and Anthemius must indeed have been a marvellous genius if that development was entirely due to him.

ISIDORUS. A native of Miletus, and an architect who assisted Anthemius in the construction of St. Sophia and numerous other edifices for Justinian, in Constantinople and other parts of his empire. Justinian was a great patron of architecture, and accordingly numerous architects and art-workmen hurried to Constantinople for employment. Vegetius



informs us that the emperor at one time had five hundred architects engaged on his numerous undertakings. Many of these were doubtless chief artificers in the several branches of decorative and ornamental art, for Justinian encouraged all the arts allied to architecture, and displayed great taste for mosaic decoration, enamelling, sculpture, metal-working, and jewellery as applied to ecclesiastical furniture. What the church of St. Sophia must have been whilst in its glory we can now form but a poor conception; its wealth in articles in the precious metals alone was almost beyond computation.

As we are now fairly launched in the middle ages, we may discontinue our list of architects in the form hitherto observed, and enter upon a brief consideration of the position and duties of architects during those centuries which saw the erection of the superb cathedrals and churches of western Christendom.

Prior to the thirteenth century, as M. Viollet-le-Duc justly remarks, there exists no certainty as to the personality of the Christian architects of France; and the same may be said with reference to those of other countries. The troubled state of society from the time of the establishment of the Christian religion to the thirteenth century drove all men who were of studious habits, and who devoted themselves to the cultivation of the arts and sciences, to seek the quiet and shelter of the cloister. Under the protection of the Church, time and opportunity were given to study and practise architecture and the decorative arts; and there is little doubt that the early mediæval architects were members of the numerous religious houses distributed over Italy, France, Germany, and England. Even the schools founded by Charlemagne for the encouragement of science and art were placed under the protection of the Church, and formed portions of great religious establishments. These were harbours of refuge for all who were skilled in literature and scientific or artistic pursuits; and within their walls congregated the men to whom we owe more than we probably shall ever realise. M. Viollet-le-Duc says:—"Towards the end of the tenth century, a time when it seemed that society was burying itself in barbarism, an abbey was founded at Cluny, and from the bosom of this religious order, during more than a century, came out nearly all the men who toiled with an incomparable energy and patience to arrest the progress of barbarism, to put in some order this chaos, and to found establishments over a great part of western Europe, from Spain to Poland. It is without doubt that this centre of civilisation, which threw so bright a light during the eleventh and twelfth centuries, exerted an immense influence on the arts, as well as on literature and politics. It is also beyond doubt that Cluny furnished western Europe with architects, as she provided clerical reformers, professors for the schools, painters, savants, doctors, ambassadors, bishops, sovereigns, and popes; for outside Cluny in the eleventh century little was to be found but darkness, gross ignorance, and monstrous abuse."



What were the limits of the duties of these early mediæval architects are not known to us; were they simply skilled draughtsmen and designers, or did they absolutely take mallet and chisel in hand, and labour along with the ordinary workmen? We are inclined to believe that the architect and master mason were different personages, the former giving the general plan of the building and occasional superintendence as it proceeded, while the master mason was the responsible builder, under whose direction all constructional and ornamental details were executed. Under the master mason the chief artificers of the several trades were placed, and received their general instructions from him. Under these conditions the architect might have been the most exalted member of a brotherhood, whilst the master mason and the chief artificers under him may have either been members of the brotherhood or laymen employed simply for the work in hand. Or the architect may have been an ordinary but specially skilled brother belonging to the house for which the work was being executed, or sent from some distant monastic establishment to consult with the resident authorities, furnish the necessary plans, and give the master mason full directions for the commencement and proper carrying out of the structure: he would, in all probability, visit the work at intervals during its construction, and supply further advice and assistance. Such, doubtless, were the architects which Cluny sent all over western Christendom in the eleventh and twelfth centuries.

We have spoken of the architect and the master mason or the active chief artificer as being, in all probability, different personages; but we are bound to acknowledge that their separate individuality has not been generally proved. It is probable that in some instances highly skilled master masons both acted as the architects and chief workmen, whilst in others they received their instructions from qualified architects placed over them. In the documents preserved to us, which relate to English buildings, the almost exclusive use of the term mason (*cementarius*) goes far to prove that here at least the architect and master mason were in many instances one and the same person. On the subject of "The Superintendents of English Buildings in the Middle Ages," a most valuable paper was read before the Royal Institute of British Architects by Mr. Wyatt Papworth;\* a few quotations from it will not be out of place here, as they have direct bearing on this interesting question.

"Omitting all mention of their predecessors employed during the period previous to the Conquest, the earliest and the only notice in the *eleventh century* is that of Robertus, *cementarius*, employed at Saint Alban's, 1077, who for his skill and labour, in which he is stated to have excelled all the masons of his time, had granted to him and his heirs, certain lands, and a house in the town. In the *twelfth century*, Arnold, a lay brother of Croyland Abbey, 1113, is designated 'of the art of masonry a most scientific master.' Of the employment of William of Sens, a layman, and

\* R.I.B.A. Transactions, 2nd Dec., 1861.

of William the Englishman, both engaged at Canterbury Cathedral, I need not say anything, except to add, that the latter has been supposed the same as a certain William or Walter of Coventry, 'one of the most renowned architects in England,' who is said to have designed Gloucester Cathedral in 1199. At the commencement of the *thirteenth century* (about 1200), the Abbot of Saint Alban's assembled a 'number of chosen cementarii, of whom M.\* Hugo de Goldcliff was the chief, a deceitful but clever workman' (artifex), as he is styled by the chronicler. \* \* \* \* Robertus, cementarius, ruled (rexit) the works at Salisbury Cathedral for twenty-five years from their commencement in 1217. M. Albericus, in 1253, was paid for task work of the form pieces, that is, window tracery, probably for Westminster Abbey Church. John of Gloucester, 1257-60, the king's mason, was rewarded, 1257-8, by Henry III., with his freedom for life from all tallage and tolls throughout the realm. He was employed at Guildford, on statues for St. Martin's Le Grand, at Woodstock, Westminster, and Windsor. Robert de Beverley, mason, 1259-76, was engaged at the palace at Westminster, on a tomb at Windsor, on repairs at Westminster Hall, at the rebuilding of Westminster Abbey by Henry III., 1267-76, on works for the coronation of King Edward I., on the mews at Charing Cross, and on the king's kitchen garden; he received an annuity of sixpence per day, and became keeper of the works at Westminster. Walter Dixi, cementarius de Bernewelle, 1277, conveyed certain lands to his son Lawrence; the legend of the seal has 'S' Walter le Masun,' with a monogram. Richard de Stow, cementarius, executed the Eleanor Cross at Lincoln, 1291-4, and was most probably the Stow who, 1306, contracted for the works of the tower at Lincoln Cathedral. William de Hibernia carved some of the sculpture for the crosses at Lincoln, Northampton, and Stoney Stratford. John de Bello, or de la Bataille, cementarius, executed those at Stoney Stratford, Northampton, Woburn, Dunstable, and St. Alban's. That at Waltham was chiefly executed by Dymenge de Legeri, or Nicholas Dymenge de Reyns, as well as the Eleanor tomb at Lincoln. M. Michael of Canterbury, cementarius, worked on that at Westcheap in London, while that at Charing was begun by M. Richard de Crundale, cementarius (who executed the tomb in the Abbey), and finished by M. Roger de Crundale, who supplied some marble for the tomb. William de Hoo, cementarius, was employed in the church of the Blackfriars, where a record of the queen was placed. The above mentioned Michael of Canterbury is no doubt the same mason who prepared the foundations in 1292 of the Royal Chapel at Westminster. Of this century, also, is the still existing incised gravestone of Richard de Gaynisburgh, cementarius of Lincoln Cathedral; it is the only one I have to mention.

"During the *fourteenth century*, Henry, surnamed Latomus from his trade, and carefully recorded as a monk, was largely employed at Evesham

\* "M. will designate those names found with the word 'Magister' and 'Master' prefixed to them."



Abbey, and probably at St. Lawrence Church adjoining it. A contract, 1314, in French, all the former documents having been compiled in Latin, was taken by William Heose 'masoune,' to erect a house of freestone; and another contract, 1321, enabled William de Keylesteds, mason, to pull down and rebuild Darley Hall, Derbyshire. Of this period are the well known works at Ely Cathedral, carried out under the direction of John de Wisbeach and of Alan de Walsingham, both monks; but unless M. John Attgrene be the master mason, instead of the 'bricklayer,' as he is called, we have not yet arrived at the name of that officer. M. Thomas of Canterbury, mason, began work in 1330 at St. Stephen's Chapel, Westminster. At Salisbury, in 1334, an agreement with Richard de Farleigh, builder, as he is designated in Dodwell's History of the Cathedral, who has not given the original word, but which it would be interesting to possess, as from what follows it is an early instance of the conjunction, apparently, of the designer and constructor, stipulates that he should be entrusted with the custody of the fabric, to order and do all necessary work in the same; and to superintend, direct, and appoint useful and faithful masons and plasterers;\* with regard to himself that he should perform useful and faithful work, and use circumspect diligence as well as provident discretion with regard to the artificers under him; that he should repair thither and make such stay as the necessity or nature of the fabric shall require; and that, notwithstanding his prior obligations at Bath and Reading, he should not neglect or delay the works of the church."

In this last case it appears to be tolerably clear that Richard de Farleigh was both architect and master mason; and the clearness of the agreement goes far to prove that, in England at least, the offices of architect or designer and master mason or practical chief builder were sometimes combined in one person. After much valuable information, in continuation of that we have just quoted, in which numerous records of the master-masons of the fifteenth and sixteenth centuries are given, along with those afforded by the Records of York Cathedral, Mr. Papworth adds:—"This recital of names and works has given only about ninety masons, but these are all I have been able to collect; though some few others might have been inserted had the quotations appeared satisfactory. The names I have mentioned must be accepted as a tithe of the hundreds that would be recovered, if the persons who possess the fabric rolls and other building documents could be induced to publish them before they become illegible or mislaid, as I fear is the case with some already. Even the few scraps just made public regarding Westminster Abbey have proved important to

\* "I have to acknowledge the obliging assistance of P. W. Ottaway, Esq., who has searched for the original document since the above was read, and who found the endorsement to be 'Conventiæ Richardi de Farleigh Lathomi,' and in the body, 'Richardi Davy (\*) de Farleigh Cementarii,'—thus proving him to have been the master mason and designer. The original words for 'masons and plasterers' are 'lathomi et cementarii,' both terms meaning masons, as carvers and wallers."

(\*) "These two words are not quite clear."



this enquiry. My opinion has already been stated, that it is to the master mason, as a general rule, that we may turn for the actual designer of all the well-known erections of the Middle Ages."

We have already said that our opinion is in favour of the belief that the architect and master mason were different personages having distinct duties; but we are bound to acknowledge that the question is difficult to decide. It is a remarkable fact that in the records, alluded to by Mr. Papworth, where master masons' (cementarii or lathomi) names are given, no superior personages are spoken of as the responsible individuals under whom the masons, taking the contracts, were to work, and from whom they had to receive instructions. Had such superior personages been recorded, the existence of properly qualified architects, having a recognised position and duties, would have been proved beyond doubt. It is quite possible, and indeed likely, that the ecclesiastics who employed these master masons were, in the generality of cases, skilled in architecture, and designed and superintended their own buildings, simply leaving all matters of construction and the control over the subordinate workmen in the hands of the master mason and responsible builder.

In the Records of Canterbury Cathedral we learn that Anselm (1093-1109) had the eastern portion of Lanfranc's cathedral taken down and rebuilt in a more magnificent style, under the care of Ernulph, prior of the monastery. It is hardly to be supposed that the prior was a working mason who undertook the duties of master on the work; it is more probable that he was a monk skilled in architecture, and that he was, strictly speaking, the architect of the building. He was succeeded by prior Conrad, who is stated to have finished the choir, and to have decorated it with so much splendour that it was afterwards designated the "glorious choir of Conrad." In this case it is highly probable that Conrad was a skilled architect, perhaps elected to the dignity he held in the monastery on account of his superior attainments in artistic matters. He must have been a remarkable man, and the choir must have borne striking evidence of his genius to have been so honourably associated with his name.

Were the two Williams, afterwards employed at Canterbury cathedral, architects or master masons, or both combined? It is difficult to say. They were laymen; and we are told that one was of "lively genius and good reputation," and that he fell from the scaffolding, raised for turning the vault, receiving injuries which compelled him to abandon the work; and that his successor was "English by nation, small in body, but in *workmanship of many kinds* acute and honest." These particulars seem to point out that both William of Sens and William the Englishman were certainly *workmen*, but they do not prove or disprove that they were architects in the modern sense of the term, namely, the designers of the work and the responsible superintendents over all the artificers employed.

In the discussion which followed Mr. Wyatt Papworth's paper, several valuable opinions were given on the subject; three of which we here quote:—"Mr. G. E. Street, Fellow, said that he had lately had occasion

to devote some study to this subject in reference to Spain, and had met with some curious information. It appeared by many old contracts and other papers that there was in Spain a class of men who carried on the practice of architecture professionally, much more in the way they now did themselves, than the men who received a shilling a day in the Middle Ages, according to Mr. Papworth's view, could have done; and he supposed that what was true of Spain would be true also of England and France. The term master of the works, 'magister operum,' 'maestro de las obras,' 'maitre de l'œuvre,' was that which was almost always used in the inscriptions referring to architects in Italy, France, and Spain; and, if he remembered right, one example among many of this existed in the Baptistery at Pisa. It appeared to him that the passages quoted by Mr. Papworth rather tended to prove that the 'master mason' was not the architect. It would seem that there were superior and inferior masons employed on the same work, each of whom made his mark on the stone, and that while the mason received sixpence per day, the master mason received a shilling. Now he did not conceive it to be possible that the men who designed with so much skill the old Gothic buildings of this country could be of such a class as to receive only a shilling a day, or no more than twice as much as an ordinary workman. Moreover, such a name as 'master mason' was not very applicable in England where the mediæval architects were as much carpenters as masons; this being the only country in Europe in which that was the case."

"Mr. R. Kerr, Fellow, \* \* \* referred to different theories on this subject; one that the principal architects of the Middle Ages were the monks; another that they were the 'master masons;' and a third (which Mr. Street advocated) that there was an architect, properly so called, between the two. He thought it was plain that the ecclesiastics of the Middle Ages had a great deal to do with architecture, because there was so great a gulf between the clergy and the laity that it was not possible that the master masons could possess that peculiar knowledge which was exhibited in the elaborated designs and complicated construction of that period. But the clergy must have had practical men of great skill, such as the master masons, to reduce their theories to practice."

"Mr. M. Digby Wyatt, V.P., said that it appeared to him that, notwithstanding the mass of interesting information collected by Mr. Papworth, the grand crux remained unsolved. \* \* \* The combination of timber and various other building materials with stone in our ancient structures, pointed, as Mr. Street observed, to the former existence of some directing minds capable of combining those materials more harmoniously than the most intelligent master masons could be expected to have done."\*

We may again turn our attention to France, which must ever remain one of the most, if not the most, important and interesting fields of investigation in connexion with matters relating to Mediæval Architecture.

\* From the R.I.B.A. Transactions, 2 Dec., 1861—Report of the discussion.



Up to the opening of the thirteenth century there appears to be little doubt that the religious bodies held all the men specially skilled in the arts and sciences, and that architecture was diligently studied in the cloister for the direct benefit of the Church. At the beginning of the thirteenth century, however, a gradual change commenced with the formation of communes. These soon realised the strength which proceeded from unity, and quickly asserted that strength by claiming special liberties and rights distinct both from the Church and the Nobility.

No sooner were several important communes established, with powers of government within the walls of their respective cities, than the arts became a public necessity, and were speedily studied by laymen. In the course of time, specially gifted men appeared, and openly assumed the dignities and duties of masters. Architecture no longer was for the Church alone, and its professors were not confined to the cloister, but trod the streets of the city, the busiest amongst its many busy citizens.

The clergy do not appear to have resisted this lay development; and we find that they did not hesitate to accept the new order of things, and employ lay architects to design their important churches. In the early part of the thirteenth century, Evrard de Fouilloy, bishop of Amiens, instructed a layman, Robert de Luzarches, to construct a great cathedral in his city. Thomas de Cormont and his son Regnault succeeded Robert de Luzarches, as architects. Their names were all recorded in letters of copper in the labyrinth (*Maison de Dalus* or *Dædalus*) which once existed in the nave of the cathedral. The inscription was as follows:—

MÉMOIRE QUAND L'ŒUVRE DE L'ÉGLĒ  
DE CHEENS FU COMENCHIE ET FINE  
IL EST ESCRIPT EL MOILON DE LE  
MAISON DE DALUS.

---

EN . L'AN . DE . GRACE . MIL . IIC.  
ET . XX . FU . L'ŒUVRE . DE . CHEENS.  
PREMIEREMENT . ENCOMENCHIE.  
A . DONT . YERT . DE . CHESTE . EVESQUIE.  
EVRART . EVESQUE . BENIS.  
ET ROY . DE . FRANCE . LOYS . \*  
Q̄ . FU . FILZ . PHELIPPE . LE . SAIGE.  
CHIL . Q̄ . MAISTRE . YERT . DE . L'ŒUVRAIGE.  
MAISTRE . ROBERT . ESTOIT . NOMES.  
ET . DE . LUZARCHES . SURNOMES.  
MAISTRE . THOMAS . FU . APRES . LUY.  
DE . CORMONT . ET . APRES . SEN . FILZ.  
MAISTRE . REGNAULT . QUI . MESTRE.

\* "C'est une erreur. En 1220, Philippe-Auguste régnait encore; mais il ne faut pas oublier que cette inscription fut tracée en 1288."—M. Viollet-le-Duc.

FIST . A . CHEST . POINT . CHI . CHESTE . LEITRE.  
 QUE . L'INCARNACION . VALOIT.  
 XIII . C . ANS . MOINS . XII . EN . FALOIT.

In connexion with the building of the Sainte-Chapelle, at Paris, we have records of another celebrated architect of the thirteenth century, Piere de Montereau or de Montreuil, a layman, and one who was held in high estimation by Saint Louis and the ecclesiastical dignitaries of his time.\* He was also employed to design and superintend the construction of the chapel of the abbey of Saint-Germain des Pres, at Paris, a work of so much beauty and constructional excellence as to have gained for him the honour, at his death, of being interred in the choir of that edifice.

A monumental slab, of the thirteenth century, has preserved to us the name of a celebrated architect of Reims, Hugues Libergier, a layman, and the designer of a beautiful church dedicated to Saint-Nicaise, now destroyed. This slab, which is preserved in the cathedral of Reims, is of stone incised. We give a drawing of it in the accompanying illustration (Fig. 1), copied from a very accurate representation, published in the *Annales Archéologiques*; and we give, in addition, the interesting description of the slab, from the pages of the same journal:—

“La gravure que nous donnerons plus bas, a été exécutée d’après un dessin extrêmement remarquable de M. Paul Durand, et qui est d’une fidélité scrupuleuse : on a compté le nombre des plis des vêtements, le nombre des boutons du petit manteau . . . Libergier ne foule aux pieds ni lion, ni chien, ni dragon, comme les autres personnages gravés ou sculptés sur des tombes gothiques ; il a les pieds sur

\* “Lorsque saint Louis eut assuré à la France la possession des insignes de la Passion que l’empereur latin de Constantinople se voyait contraint de livrer à prix d’argent, il chargea en même temps ses orfèvres de les envelopper des plus riches métaux, et son architecte, Pierre de Montereau, de leur construire une grande châsse ouvragée comme un filigrane, tout illuminée de verrières, toute resplendissante d’or et d’azur. Jamais ordre royal ne fut mieux exécuté. Ce reliquaire sans pareil que voulait le saint roi, maître Pierre l’a réalisé en élevant la Sainte-Chapelle. On croit que saint Louis posa la première pierre de l’édifice en 1245. Trois ans après, le dimanche de Quasimodo, 25 avril 1248, Eudes de Châteauroux, évêque de Tusculum, légat du siège apostolique, consacrait l’église haute sous le titre de la Sainte-Couronne et de la Sainte-Croix, tandis que l’archevêque de Bourges, Philippe Berruyer, célébrait la même cérémonie dans l’église inférieure qu’il plaçait sous le patronage de la Vierge Marie. . . . Le grand artis te qui a immortalisé son nom par la production de ce chef-d’œuvre, vécut assez pour le voir dans toute sa splendeur. Pierre de Montereau est mort dix-huit ans après la consécration de la Sainte-Chapelle, le 17 mars 1266. Les religieux de Saint-Germain-des-Prés, qui devaient à son talent les plus beaux édifices de leur abbaye, lui donnèrent un glorieux tombeau dans la chapelle de la Vierge. Jusqu’à la fin du siècle dernier, on voyait sur sa sépulture une dalle gravée au trait, sur laquelle il était représenté la règle et le compas à la main. Son épitaphe latine composée de cinq vers hexamètres, lui donnait les titres de *fleur pleine de bonnes mœurs* et de *docteur des architectes*. Une autre tombe, pareillement gravée, recouvrait les restes de sa femme Agnès. Dans l’épitaphe française de cette tombe il était nommé *mestre Pierre de Montreuil*. Ces monuments, qui auraient aujourd’hui tant de prix à nos yeux, ont disparu avec l’édifice qui les contenait. La cathédrale de Reims possède une dalle funéraire qui peut nous donner une idée de la tombe de Pierre de Montereau ; c’est celle de Hugues Libergier, architecte de la célèbre église abbatiale de Saint-Nicaise, mort en 1263.”—M. F. de Guilhermy—*Description de la Sainte-Chapelle*. Paris, 1867.



des nuages et la tête en plein dans le ciel, où deux anges l'encensent comme s'il était un saint. Il tient à la main gauche le bâton de l'architecte, la verge géométrale ('virga geometralis'), si souvent nommée dans nos anciennes légendes, et dont l'architecte de Theodoric, roi des Visigoths, était déjà armé au VI<sup>e</sup> siècle. Cette règle



est divisée en demi-trait au-dessous et au-dessus de la main, en traits pleins à l'endroit même où la main se pose. L'intervalle de ces divisions, la partie où elles existent, celles où il n'y en a pas, la longueur totale et la forme du bâton pourraient donner lieu à des considérations dont le résultat jetterait peut-être du jour sur les

dimensions et les proportions des édifices du XIII<sup>e</sup> siècle. C'est un sujet d'investigation que nous livrons à nos lecteurs. Aux pieds de Libergier, à sa gauche, est la louve qui a monté les pierres de l'église ; à sa droite, l'équerre sous laquelle se sont alignées les assises. Libergier porte enfin de sa main droite, la main puissante, le modèle idéal de l'église qu'il a bâtie ; il l'appuie contre sa poitrine comme son œuvre chérie. N'aurions-nous que cette tombe d'un architecte du XIII<sup>e</sup> siècle, que nous serions en droit de croire, par tous ces caractères, à la beauté des édifices du moyen âge, comme nous croyons à la beauté de la musique gothique, en considérant les monuments analogues à celui que nous avons donné.

"Libergier était laïque, ainsi que le prouve son costume purement civil. Au XIII<sup>e</sup> siècle, l'artiste, clerc ordinairement jusqu'alors, se sécularise et se marie : il a femme, comme Pierre de Montereau ; femme et enfants, comme Erwin de Steinbach. La niche où Libergier se dresse est du XIII<sup>e</sup> siècle : encore énergique par les crochets du pignon, par les trèfles cintrés du tympan, mais déjà gracieuse par les bases à moulures nombreuses, par les consoles à riches feuillages, par les chapiteaux chargés d'une abondante végétation. Nous sommes au XIII<sup>e</sup> siècle, dans la seconde moitié, et il ne nous reste plus qu'à lire l'inscription pour asseoir définitivement les caractères que nous venons d'indiquer.

+ CI . GIT . MAISTRE . HUES . LIBERGIERS . QVI . COMENSA . CESTE .  
EGLISE . AN . LAN . DE . LINCARNATION . M . CC . ET . XX . IX . LE .  
MARDI . DE . PAQUES . ET . TRESPASSA . LAN . DE . LINCARNATION . M .  
CC . LXIII . LE . SAMEDI . APRES . PAQUES . POUR . DEV . PIEZ . POR . LVI .

"Libergier fut donc trente-quatre ans à Saint-Nicaise. Est-il mort jeune, comme on pourrait le croire à sa jeune et imberbe figure, d'après sa tombe ; ou bien cette jeunesse ne serait-elle pas plutôt un emblème du bonheur des saints qu'il a dans le ciel ? Un homme, porté sur les nuages et que deux anges encensent, est en paradis ; là, il n'y a plus de sexe ni d'âge, mais une jeunesse éternelle. C'est ainsi que les élus sont représentés au portail occidental de Notre Dame de Paris."\*

"Ces ondulations, sur lesquelles Libergier pose les pieds, semblent à M. Paul Durand représenter la terre et non le ciel, ainsi que nous l'avons dit. Nous conviendrons qu'il peut y avoir doute à cet égard ; car, au moyen âge, on figure ainsi les accidents du terrain et des nuages. Cependant, il n'est guère possible d'affirmer que ces lignes représentent le sol plutôt que les nuées, la terre plutôt que le ciel. Mais nous tenons pour le ciel.

"L'église que porte Libergier est idéale et non réelle ; on y remarquera seulement les deux flèches du portail qui rappellent que deux flèches furent exécutées au portail occidental de Saint-Nicaise. Les deux anges ont la figure effacée sur la dalle ; celui qui est à droite de Libergier a conservé un soupçon de bouche, de nez et d'yeux ; on a reproduit religieusement ce qu'on voyait, et l'on n'a pas voulu restaurer la dalle, même sur le papier. Faites attention à la forme du béguin et du bonnet de pluche, au petit capuchon, au petit manteau, à la robe courte, aux chausses fines et collantes ; tous ces détails du costume civil, pour un personnage de condition moyenne ou inférieure, sont du plus haut intérêt."†

In the year 1257, Jean de Chelles was employed by Regnault de Corbeil to construct the two gables of the transepts, and the first chapels of the choir of the cathedral of Notre-Dame, at Paris. His work was so highly

\* *Annales Archéologiques*, vol. i., p. 145.

† *Ibid.*, vol. i., p. 215.



esteemed that his name was inscribed on the lower part of the south doorway. The inscription is in relief, and reads as follows :—

ANNO . DOMINI . MCCLVII . MENSE . FEBRUARIO . IDUS . SECUNDO .  
HOC . FUIT . INCEPTUM . CHRISTI . GENITRICIS . HONORE .  
KALLENSI . LATHOMO . VIVENTE . JOHANNE . MAGISTRO .

From this we certainly have an additional proof in favour of Mr. Wyatt Papworth's opinion that, in the middle ages, the master masons were the acknowledged architects of the fabrics they erected.

Twenty years later Erwin de Steinbach, the celebrated architect of Strasbourg cathedral, commenced the western façade of that building; and the highest honour which could probably be paid to an architect was secured to him when the following inscription was placed above the grand doorway :—

ANNO . DOMINI . MCCLXXVII . IN . DIE . BEATI .  
URBANI . HOC . GLORIOSUM . OPUS . INCOHAVIT .  
MAGISTER . ERVINUS . DE . STEINBACH .

In this inscription Erwin is designated *magister* only, just as the Williams of Canterbury cathedral were spoken of in the mediæval documents; but it is uncertain in Erwin's case, as in that of the two Williams, if the word is intended to signify master of the work (architect only), or master mason (master builder or chief workman, also fulfilling the duties of architect or designer). It is much to be regretted that the middle-age records and inscriptions are not a little more explicit on these and attendant matters.

M. Viollet-le-Duc, to whose writings we have referred for the above inscriptions and other particulars relative to the French architects, speaking of the duties of the *master of the work*, says :—"It is extremely difficult to learn at the present time what were the exact functions of the master of the work in the thirteenth century. Was he only employed to furnish the drawings of the buildings and to direct the workmen, or did he, as in the present day, control the expenditure of the funds? The documents which we possess, and which touch somewhat on this subject, do not date anterior to the fourteenth century, and at that epoch the architect is only called in as a man of art who is indemnified for his personal work. The person for whom the building is to be constructed buys in advance the necessary materials and apportions them, engages the workmen, and all the work is done according to the mode known to us under the name of *RÉGIE*. The valuation of the works, and the administration of the funds, do not appear to concern the architect. The mode of adjudication only appears plainly later on, at the end of the fourteenth century, but then the architect loses some of his importance; it seems that every department treats directly, outside his action, for the execution of every description of work, and these adjudications, made for the benefit of the master of the

craft who offers the greatest reduction at an open auction, form veritable contracts.

"Here is a curious document which gives one an idea, in a precise manner, of what was the function of an architect in the commencement of the fourteenth century. It treats of the construction of the cathedral of Gerona; but the usages of Catalonia should not differ from ours at that epoch, besides there is a question of a French architect.

"The chapter of the cathedral of Gerona decides, in 1312, to replace its old Romanesque church by a new one, grander and more worthy. The works do not commence immediately, and as administrators of the work (*obreros*), Raymond de Viloric and Arnould de Montredon are nominated. In 1316 the works are in activity, and there appears, in February, 1320, on the capitulary registers, an architect designated by the name of Master Henry de Narbonne. Master Henry dies, and his place is occupied by another architect, his compatriot, named Jaques de Favariis; he engages to come from Narbonne *six times a year*, and the chapter assures him a salary of two hundred and fifty *sous* per quarter.\* . . .

"Here then is a council of administration which, probably, is charged with the management of the funds; then a strange architect is called in, not to follow the execution of the work every day and to look after the workmen, but only to prepare the designs, to give the details, and to inspect the works at distant intervals, and see that they are conformed with; for his services as an artist they allow him, not a proportionate honorarium, but a salary which is equal, per quarter, to a sum of fifteen hundred francs of our days. It is probable that the mode of fixed payment was the general usage in the employment of an architect. . . .

"During the fifteenth century, the high position which the architects of the thirteenth and fourteenth centuries had occupied gradually declined; and likewise the buildings lost that grand character of unity which they had preserved during the fine periods. One perceives that each body of tradesmen worked in its own line without one general direction. This fact is striking in the many documents which remain to us from the fourteenth century: the bishops, chapters, and nobles, when they desire to build, summon the master masons, carpenters, sculptors, carvers of images, ironworkers, plumbers, &c., and each makes his estimate, and his independent bargain; of the architect there is no question, each craft executes its own proper project. Thus it is that the monuments of this epoch present defects of proportion and harmony."

We have thus briefly, from the best materials at our disposal, endeavoured to give the student a clear idea of what is generally believed to have been the position and duties of an architect during the middle ages, the epoch during which the most superb structures of western Christendom were designed and erected. The exact question of how far the architect

\* Extracted from the register entitled: *Curia del vicariato de Gerona, liber notularum ab anno 1320 ad 1322, folio 48. Arch. de la cathéd. de Girone.*

proper and the master mason were distinct, or how frequently they were combined in the same individual, will, we fear, remain a grand crux, unsolved; our own opinions on the subject have already been given.

In the sculptures which ornament certain buildings of the middle ages, one occasionally meets with representations of the architect or master of the work, carrying, as attributes, the implements of his profession, commonly a large square and a pair of compasses. It is thus he is represented on one of the keys of the south aisle of the church of Semur.\* The figure is that of a layman, seated, and holding in one hand an ordinary builder's square, and in the other a rather clumsy pair of quadrant dividers. The architect is also sometimes represented with a measuring rod or baton ("*virga geometralis*") in his hand, as in the incised slab of Libergier's tomb, at Reims, already described and illustrated (Fig. 1), where the square and a pair of compasses of rather peculiar shape are also introduced as attributes. In one of the interesting hexagonal bas-reliefs of the campanile of the cathedral of Florence, an architect is represented, baton in hand, personally directing two masons, who are standing on a scaffold, setting blocks of stone on what appears to be a tower. Importance is given to the architect by his being rendered as a giant in comparison with the masons, an expedient frequently resorted to by middle-age artists to individualise the most important characters in their works. In the carvings of the stalls (thirteenth century) of the cathedral of Poitiers, an architect is represented as a youthful figure, seated, holding in one hand a moulded tablet, and in the other a quaintly-shaped pair of dividers, very similar to those indicated on Libergier's tomb; a plummet-level and a square are also introduced in the composition. In the stained glass (thirteenth century) of one of the apsidal chapels of the cathedral of Chartres, an active building scene is depicted, in which three masons are shown busily employed in hewing large stones, whilst the architect, a hooded figure, though apparently that of a layman, is engaged examining and testing the accuracy of the walls of a tower in process of construction; and carrying in his hand what appears to be a plumb-rule. Representations of architects are frequently found in the miniatures of illuminated manuscripts; M. Viollet-le-Duc gives a drawing of one,† receiving instructions from King Offa with reference to the building of St. Alban's abbey, copied from a manuscript in the Cottonian Library, British Museum (Nero D. 1). The architect holds in his left hand the usual attributes of his profession.

The following are the names of the remaining chief Christian architects of whom we have any authentic knowledge, and who practised prior to the Renaissance. The last architect mentioned by us in our previous list was Isidorus, who assisted Anthemius in the erection of the church of St. Sophia. Between his epoch and the ninth century we have no records of

\* An illustration of this sculpture is given in *Dictionnaire Raisonné de l'Architecture Française*, vol. i., p. 115.

† *Ibid.* vol. i., p. 115.



the names and works of architects, unless indeed we can consider such an enthusiast in church building as Benedict Biscop (671-86) an architect. Bede tells us that Biscop made five journeys to Rome for the chief purpose of acquiring information relative to the modes of building and decorating churches. He is also stated to have gone to Gaul to procure skilled masons to construct his edifices. It is highly probable, therefore, that he was the architect proper of the churches erected through his exertions.

#### NINTH CENTURY.

MAGNUS EGINHARDUS. Architect and superintendent-general of the buildings erected for Charlemagne, and, according to Mabillon, the artist who executed the celebrated plan of the abbey of St. Gall, in Switzerland (in the year 820), for the abbot Gozpertus. (See article *Abbey*.) Eginhardus is also stated to have built the cathedral of Aix-la-Chapelle and the monastery of Mulinheim or Seligenstadt. He was a member of a religious brotherhood.

RUMALDE or ROMUALDUS. The architect who, according to Felibien,\* constructed the first cathedral of Reims (840). Milizia says that in building this edifice he used "the materials of the ancient city walls, which were in a great measure demolished for the purpose. This church has been celebrated as the most magnificent of that time;† but all the descriptions are confined to the front of the altar, which was of massive gold, studded with gems; a statue of the Virgin, also of gold, and many sacred vessels of great value."

TIODA. An architect of Spain, who erected for king Alphonso the Chaste, a palace at Oviedo, now supposed to be the episcopal palace. At the same place he erected the basilica of St. Salvador, which was destroyed in the fourteenth century; the churches of St. Maria and St. Michael, and the church of St. Julius, outside the walls. Alphonso the Great thus praises Tioda's palace:—"Cryus operis pulchritudo plus præsens potest mirari quam eruditus scriba laudare."

#### TENTH CENTURY.

EBERHARD. An abbot, skilled in architecture, who designed and commenced the erection of the monastery of Einsiedlen, in Switzerland. The buildings were afterwards entrusted to another architect, named Tetlandus, by whom they were completed.

\* *Vie des Architectes*, p. 173.

† "Description Historique et Statistique de la Ville de Rheims, tom. i., p. 307. The walls were previously demolished by Charles Martel. Saint Rigbert afforded the materials for the building of this church, which was not finished till the tenth century, under Hincmar, who had it paved and glazed, and dedicated it anew in the presence of his suffragans and Charles the Bald. Above the door of the left arcade of the grand façade of the present church, is sculptured a representation of the first, which, according to Flodoard, was richly gilt. It was flanked by round towers, covered with pinnacles, and resembled a castle. It was destroyed by fire, 24th July, 1210."

## ELEVENTH CENTURY.

**BUSCHETTO.** An architect of Dulchio, to whom the Pisans entrusted the erection of their cathedral in 1064. Buschetto appears to have shown great skill and ingenuity in the arrangement of the numerous fragments of antique art, which were imported by Giovanni Orlandi, after his victory at Palermo; and he is also recorded as having been highly skilled in mechanics. One of his epitaphs at Pisa is as follows:—

QUOD VIX MILLE BOUM POSSENT JUGA JUNCTA MOVERE,  
ET QUOD VIX POTUIT PER MARE FERRE RATIS,  
BUSCHETTI NISU, QUOD ERAT MIRABILE VISU,  
DENA PUELLARUM TURBA LEVAVIT ONUS.

Buschetto, previous to his appointment at Pisa, built the church of St. Paolo, at Pistoja.

**FULBERT.** Bishop, and the accredited architect of the basilica of Chartres, which was destroyed by fire in 1194. Fulbert died in 1029, and the basilica was continued by his successor, Thierry. The edifice was consecrated on the 17th of October, 1037.\*

**HUMBERT.** Archbishop of Lyons, and the recorded architect of a stone bridge over the Saone, in that city.

**VIVIANUS.** Milizia states that the memory of this architect is preserved in an inscription which is on a stone in the church of St. Peter of the Mountains, in the diocese of Astorga, in Spain. It runs thus:—

QUEM TEGIT HIC PARES DICTUS FUIT HIC VIVIANUS,  
SIT DEUS HIC REQUIES ANGELICAQUE MANUS.  
ISTE MAGISTER ERAT ET CONDITOR ECCESIARUM  
NUNC IN EIS SPERAT QUI PRECE POSCIT EARUM.

Vivianus appears to have erected several churches, and to have displayed considerable originality in their designs.

**PIETRO DI USTAMBER.** According to Milizia, he was the architect employed by King Ferdinand of Castile to take down the old church of St. John the Baptist, at Leon, and to erect a new one on its site, which was dedicated to St. Isidorus, whose remains were removed from Seville. "Within the church is the sepulchre of the architect, a lofty tomb of polished stone, with an inscription, which imports that he also built the bridge called Ustamber. The same inscription panegyrises the supernatural abstinence of the architect, and makes him famous for miracles."†

**LANFRANC.** Archbishop of Canterbury, rebuilt the cathedral of his diocese, most probably in imitation of the church of the monastery of St. Stephen, at Caen, of which establishment he was prior previous to his call to England. He was doubtless well versed in architecture, and in all likelihood was the architect of his own cathedral.

\* *Historiens des Gaules*, vol. ii., pp. 29 and 217.

† *Lives of Celebrated Architects*, vol. i., p. 133.

ERNULPH. Prior of the monastery of Christ Church, Canterbury, under archbishop Anselm, and architect deputed to reconstruct the choir of Lanfranc's cathedral, at Canterbury. The new choir was completed in the last years of the century.

DE CARILELPHO. Originally abbot of St. Vincent, in Normandy, and skilled in architecture. He commenced the construction of Durham cathedral on a design he had procured in France.

DE LOSINGA. Bishop, and reputed architect of the earlier portions of Norwich cathedral.

#### TWELFTH CENTURY.

LANFRANCUS. An Italian, who constructed the cathedral of Modena, 1099-1108.

BUONO. A celebrated architect and sculptor, who was employed, by the doge Domenico Morosini, in 1154, to erect the campanile of St. Mark, at Venice. "It is not known from whence Buono came: we know only that he executed many works elsewhere; in Naples, the Capuan castle, now known as the Vicaria, and the castle of Vovo; at Pistoja, the church of St. Andrea; at Florence, he gave the design for enlarging the church of Santa Maria Maggiore, the majestic walls and vaults of which still remain; in Arezzo he built the town-house with a bell-tower."\*

RAIMONDO. The architect employed by the chapter of Lugo, in Spain, to construct a cathedral in that city. Milizia gives some interesting particulars relative to the payment of this architect, but does not inform us from what source he has procured them. "The bishops, the canons, and the nobles, stipulated, in 1139, to give the architect an annual salary of 200 soldi; and, in case of there happening any change in the specie, six marks of silver, thirty-six changes of linen, seventeen loads of wood, shoes and boots as many as he might require, every month two soldi for meat, a quart of salt, and a pound of wax. Maestro Raimondo agreed to this, and undertook to assist in the work every day; but dying before completion, was succeeded by his son. The cathedral was finished in 1177."†

BONANO. An architect of Pisa, who, in conjunction with a German architect, called Wilhelmus, commenced the celebrated campanile at Pisa in the year 1174. Want of sufficient attention in the preparation of the foundations resulted in a serious settlement, which threw the work out of the perpendicular. The campanile is now commonly known as the "leaning tower." The tower was completed in the fourteenth century by another Pisan architect, named Tomaso.

SUGER or SUGGERUS. Abbot of Saint-Denis, near Paris, was a man of great genius, skilled in architecture and all the allied arts. He erected (1140) a magnificent church in connexion with his abbey, and decorated it in a most sumptuous manner. Much of this building still remains, chiefly in the western façade and the chapels of the apse.

\* *Lives of Celebrated Architects*, vol. i., p. 139.

† *Ibid.*, vol. i., p. 135.



ODO. Prior of Croyland, and the reputed architect of his abbey. He was assisted by a master mason, named Arnold, a lay brother of the abbey.

CONRAD. Prior of the monastery of Christ Church, Canterbury, and a man evidently well versed in architecture and decorative art. He was architect of the choir of Canterbury cathedral, left unfinished by his predecessor, prior Ernulph; and he displayed so much skill in its adornment, that it was afterwards designated the "glorious choir of Conrad." It was dedicated by archbishop William, in 1130.

WILLIAM. A native of Sens, in France, who was entrusted with the reconstruction of the choir of Canterbury after its destruction by fire in 1174. This skilful architect resigned his appointment on receiving serious injuries by a fall from the scaffold erected for turning the vault.

WILLIAM. An English architect, who succeeded William of Sens on the works at Canterbury, in 1178. He finished the choir, and constructed the retro-choir and corona, works which still remain magnificent monuments of his genius. They were completed in 1184.

GUNDULPHUS. Bishop of Rochester. He is, according to Gwilt, "considered to have designed Rochester castle; his house, and the abbey for the nuns at Malling, in Kent; White Tower of the Tower of London, and the western portion of Rochester cathedral; the eastern portion was erected later by bishop Ernulf."

GEOFFRY DE NOIERS. The architect employed by St. Hugh of Lincoln to design Lincoln cathedral. The nationality of this architect has been a subject of considerable discussion. Noiers has by many been supposed to be a town in France, and the birth-place of Geoffry, but Mr. Dimock\* has proved that "de Noires" was an hereditary Northamptonshire family name in the time of St. Hugh (1186-1200). It is, therefore, probable that Geoffry was an Englishman.

It is much to be regretted that the documents relating to our important ecclesiastical structures are not all as explicit as those which speak of the works at Canterbury, unsatisfactory as they are; it would have been interesting to know clearly how far the dignitaries of the Church fulfilled the duties of sole architects on their own buildings; and how frequently laymen, like William of Sens and William the Englishman, were called in to assume the responsible duties under the general instructions of the superior ecclesiastics. Take Peterborough cathedral, for instance; we know that all the beautiful Norman work there was executed under the abbots John of Seez and Martin of Bec (1118-33), abbot William de Waterville (1155-77), and abbot Benedict (1177-93), but there is no record that we know to exist which either states that any of these were their own architects, or that laymen were employed on their works. There is little doubt that all these ecclesiastics were men well

\* *Gent. Mag.*, June, 1861.

versed in the arts of their times, and skilled in architecture; and, as we have already hinted in the case of Conrad of Canterbury, it is very probable that in the election of abbots and priors preference was given to those men who were known to be skilful architects, with the view to their undertaking the improvement or reconstruction of the monasteries and churches placed under their care. In the brief list we are now giving we are not aiming at simply enumerating a number of names; we are rather aiming at supplying the student, in a few words, with the most reliable materials at our disposal, from which a somewhat clear idea may be formed of what the positions and duties of architects have been in various countries during the early and mediæval times. With this view we are giving a selection, rather than attempting to give a copious list.\*

#### THIRTEENTH CENTURY.

As we have already spoken of several important architects who lived during this century, namely, Robert de Luzarches, Thomas de Cormont and his son Regnault, Pierre de Montereau, Hugues Libergier, Jean de Chelles, and Erwin de Steinbach, we need not again mention them in the present list; neither shall we allude to those masters whose names are given in our quotation from Mr. Wyatt Papworth's paper.

**NICCOLA DA PISA.** A celebrated architect who constructed, in his native city, the church of St. Michele, several palaces, and the campanile of the Augustins. His earliest great work is stated to have been the monastery and church of the Dominicans, at Bologna: he afterwards erected the church of St. Antonio, at Padua; the church of St. Maria, at Orvieto; the church of St. Maria Gloriosa de' Frari, at Venice (about 1250); and an abbey and church in the plains of Tagliacozzo, near Naples, as a memorial of the decisive victory gained by Charles I. over Conrad. He executed some important repairs and additions to the duomo of Volterra, and the Dominican monastery and church at Viterbo. He is also recorded to have furnished designs for the church of St. Giovanni, at Siena; the Dominican monastery at Arezzo (carried out by his pupil, Maglione); and for the monastery and church of St. Trinita, at Florence.

**LAPO OR JACOPO.** A native of Germany, who practised architecture in Italy. He constructed the interesting church of St. Francesco, at Assisi. He resided in Florence, where he built several structures, amongst which were the archbishop's palace and palazzo il Bargello.

**GIOVANNI DA PISA.** An architect of considerable repute in his native town. He constructed the fortifications of Pisa, and designed the original pulpit of the cathedral, which was destroyed by fire in 1596. This work was considered Giovanni's masterpiece, and only three small statues which

\* For other names, especially of later architects, the student may consult Milizia's *Lives of Celebrated Architects*; Vasari's *Vite de' piu Eccellenti Pittori*, &c.; Gwilt's *Encyclopædia of Architecture*; *The Building News*, Sept. 16, 1859, p. 843, &c.

ornamented it were saved. He is also stated to have designed and commenced the church of St. Maria della Nuova, at Naples, which was afterwards completed by a Neapolitan architect, named Masuccio. He also constructed the Campo Santo, at Pisa; the façade of the cathedral of Siena; and numerous buildings at Arezzo, Pistoja, Orvieto, and elsewhere. He was the son of Niccola da Pisa.

MASUCCIO. An architect of Naples, who completed the church of St. Maria della Nuova, and designed the churches of St. Giovanni Maggiore and St. Domenico Maggiore; restored the cathedral of St. Gennaro; and constructed the palazzo St. Angelo and the palazzo Colombrano, at Naples.

FERRANTE MAGLIONE. A Pisan architect, and scholar of Niccola da Pisa. He erected the church of St. Lorenzo, at Naples, and the Dominican monastery at Arezzo (designed by his master). He also erected the palazzo Vecchio and many other buildings in Naples.

ARNOLFO DEL CAMBIO. One of the most renowned architects of his day. He built new walls and towers around Florence, his native city, and prepared the plans and a model of the cathedral of St. Maria del Fiore, and superintended the works until his death in 1310. He constructed the loggia of Or St. Michele, the loggia and the piazza dei Priori, the church of St. Croce, the church of La Badia, and the palazzo dei Signori, now the palazzo Vecchio, all at Florence.

FUCCIO. A Florentine architect and sculptor, who, according to Vasari,\* is the reputed builder or restorer of the church of St. Maria sul Arno, at Florence. He also finished the Vicaria, at Naples, and Castello dell' Uovo, in the same town, which was begun by Buono.

WILLARS DE HONECOURT. Architect of the church of Saint-Yved, at Braisne (Aisne), the choir of the cathedral at Cambrai (Nord), and the church of St. Elizabeth, at Kaschau, Hungary. This architect has left us a most interesting architectural sketch-book, containing numerous plans, details, and figure drawings.† Amongst the former we find the plan

\* *Vasari*, vol. i., p. 255.

† "Willars de Honecourt, the fac-similes of whose sketch-book are in the hands of every body, is the next on the list. So much has been said and written concerning these drawings, that I shall very much curtail my description of them, which would otherwise have been long, considering that these are the most perfect and the largest collection of the drawings of the middle ages which have come down to us; and first of all I must claim Willars for our profession, as some attempts have been made to hand him over to the sculptors and painters, because, forsooth, he drew the figure too well and frequently. There is one fact, however, which completely, so far as I see, upsets this theory, and it is this—the tendency of an artist, either painter or sculptor, or architect, would be to sketch details which would come in useful to him. Thus the painter and sculptor would draw parts of the human body, bits of costume, anatomy, etc.; while the architect, on the contrary, would draw mouldings, capitals, foliage, etc. Now, in the sketches under consideration we do find the capitals, foliage, and mouldings, but we do not find studies of hands, of feet, of anatomy, etc.; but, on the contrary, there are a number of problems only useful to a man engaged in actual building. The sketches were first made with a leaden or silver pencil, either of which would perfectly mark on the vellum. If the subject were an architectural one, the straight lines



of the choir of Notre-Dame, Cambrai, which was erected from his designs, but which no longer exists.

PIERRE DE CORBIE. A celebrated architect, and contemporary and friend of Willars de Honecourt. He erected numerous churches in Picardie, and he is believed to have designed the apse chapels of the cathedral of Reims.

ESTIENNE DE BONNUEILL. The architect who was sent, along with ten master workmen, from Paris, to erect the cathedral of Upsala, in Sweden, after the model of the cathedral of Notre-Dame, at Paris.

PIETRO PEREZ. A Spanish architect, who designed and commenced the cathedral of Toledo.

ELIAS OF DEREHAM. A personal friend of Richard Poore, bishop of Salisbury, who commenced the cathedral. Elias is recorded to have acted as master of the works (architect?) for the first twenty years, and was succeeded by the "Robertus, cementarius," mentioned by Mr. Papworth. It is probable that Elias was the designer of the cathedral, and may reasonably be considered to be its architect.

EDWARD FITZ-ODO. An Englishman, who is reputed to have been the master of the works at Westminster abbey, for Henry III.

#### FOURTEENTH CENTURY.

GIOTTO. Painter and architect, who designed the celebrated campanile of the cathedral of Florence, and the chapel of St. Maria dell' Annunciata, commonly known as St. Maria dell' Arena, at Padua.\* (See *Chapel*.) The campanile was commenced by Giotto in 1334, in accordance with a decree which instructed him to erect a tower which should surpass in height, richness of materials, and elaborate workmanship, all that had

were ruled, and the circles put in with a compass, one end of which had a leaden point. These lines were afterwards gone over with a blackish brown ink, by means of the hand alone, no instrument being employed. Upon looking again at the MS., two months ago, I was struck more than ever by the extreme precision of the touch; there is no faltering or wavering, but the line is just as thick and as firm where it ends as where it begins. Again, in drawing things in small, mouldings and foliage become simplified, so as not to break up the breadth of the composition. Clearness is got by blacking hollows where they occur, and the grounds of ornament, such as capitals, etc. The walls of the plans, however, are not etched, and we shall find this practice obtaining even in the time of Thorpe, the majority of whose plans are not etched, although not devoid of colour. One would imagine that Willars might have etched them up with his leaden point, as he often did his drapery; but nothing of the kind occurs. Another peculiarity of our architect was, that, when he copied any executed work, he copied it not as he saw it, but with variations of his own, and as he would execute it himself; thus the window at Chartres is considerably altered in order to get more space for light, while that at Lausanne is so much so that it can hardly be recognised."—W. Burgess, *Transactions of the Royal Institute of British Architects*, Nov. 19th, 1860.

\* "At this period (1306) Giotto, then young, was working at Padua, and Scrovegno employed him not only to build, but to decorate the edifice. The chapel consists of a single nave, "with a tribune at its extremity, in a simple Gothic style. The unity of design apparent in the chapel and in the paintings no doubt resulted from both being designed by the same mind; and what adds to their interest is, that Dante lodged with Giotto when the works were in progress."—Murray, *Handbook for North Italy*.

been achieved in architecture by the Greeks and Romans. (See *Campanile*.) It was completed, after Giotto's death, by Taddeo Gaddi, who, however, omitted the spire originally designed by his predecessor. Giotto also constructed a western façade to the cathedral left unfinished by Arnolfo di Cambio; this façade was destroyed in 1558.\*

ANDREA DA PISA. The architect to whom is attributed the design of the church of St. Giovanni, at Pistoja, commenced in the year 1337. He was largely employed by Gualtiere, duke of Athens, and governor of Florence, in works at the ducal palace, and the city towers and gates. Andrea was reputed the most skilful bronze caster of his day in Italy, and was accordingly employed to make those noble gates of the baptistery, at Florence, which are an enduring record of his genius. He was held in high esteem by the Florentines, who elected him a citizen, raised him to the magistracy, and freely bestowed on him great wealth. Andrea is said, during a residence in Venice, to have designed the arsenal, which was subsequently carried out by the Venetian architect, Filippo Calendario, who was hanged as a conspirator in 1354. Andrea also designed the castello della Scarperia, at Mugello.

TADDEO GADDI. A pupil of Giotto, who, in conjunction with his master and Andrea da Pisa, undertook numerous important buildings. His most renowned work, however, was the completion of the campanile, designed and left unfinished by Giotto. He stood high in the reputation of his fellow-citizens, and at one time was head master of the commune. Whilst occupying that office he was appointed architect for the construction of public granaries over the partial ruins of the loggia, built by Arnolfo del Cambio. Taddeo also made extensive additions to the castle of St. Gregorio.

ANDREA ARCAGNUOLO OR ORCAGNA. A renowned architect, sculptor, painter, and poet; son of the celebrated goldsmith, Maestro Cione; born at Florence in the year 1329. This architect succeeded Taddeo Gaddi on the works at the loggia, converting his granaries into a church, and erecting therein a tabernacle to enshrine the famous painting of the Virgin by Ugolino da Siena. This superb tabernacle was completed in 1359.† Andrea also erected the celebrated loggia de' Lanzi, originally intended as a place for public assembly, in wet weather, for the discussion of commercial and political subjects. His brother, Bernardo, succeeded him as architect

\* The general design of Giotto's façade is preserved in a representation in the background of a lunette in the outer cloister of the convent of St. Marco.

† "Summoned for this purpose from Orvieto, whither he had gone to superintend the mosaics of the cathedral, Orcagna returned to Florence to design and construct this work, which, perhaps, embodies more than any other the spirit of mediæval Christian art. Built of white marble in the Gothic style—enriched with every kind of ornament, and storied with bas-reliefs illustrative of the Madonna's history from her birth to her death—it rises in stately beauty towards the roof of the church, and whether considered from an architectural, sculptural, or symbolic point of view, must excite the warmest admiration in all who can appreciate the perfect unity of conception through which its bas-reliefs, statuettes, busts, intaglios, mosaics and incrustations of pietre dure, gilded glass and enamels are welded into a unique ensemble."—Perkins, *Tuscan Sculptors*, vol. i., p. 79.



to the commune. There is some reason to believe that Andrea Orcagna built the Certosa, near Florence, but absolute proofs are wanting.

LORENZO MAITANI. An architect of great skill, well versed in sculpture, mosaic-working, and bronze-casting. He designed and lived to see completed the cathedral of Orvieto\* (1290-1330).

AGOSTINO DA SIENA. A distinguished architect, who, in conjunction with his brother Angelo, erected numerous important buildings. He designed the northern façade of the cathedral of Siena, and the palazzo de' Nove Magistrati; he began the church and convent of St. Francesco, and the church of St. Maria, in the piazza Manetti; he also constructed a grand fountain in the piazza opposite the palazzo della Signoria, the hall of the Grand Council, and the tower of the palazzo Pubblico. He was likewise engaged on works at Orvieto, Assisi, Arezzo, and Bologna.

GIACOMO LANFRANI. A pupil of Agostino da Siena, designed and erected the churches of St. Antonio, at Venice, and St. Francesco, at Imola; and executed several ornamental works at Bologna.

HEINRICH AHRLER. A native of Gmünden, in Germany, and commonly believed to have been the head architect of the cathedral of Milan (1388-99). With him were associated Nicholas Bonaventura, of Paris, and several other brethren from Normandy, Friburg, Ulm, and Bruges.

JEAN RAUT. The architect who completed the cathedral of Notre-Dame, at Paris.

HANS HÜLTZ. An architect of Cologne, who succeeded the Steinbachs on the works of the cathedral of Strasbourg. He carried the works up to the four winding staircases, and his son completed the tower.

JOST DOTZINGER. A native of Worms, who succeeded Hültz at Strasbourg cathedral. He executed several minor works, amongst which was the repairing of the choir and vaulting, and the construction of the font.

ALFONSO DOMINGUES. An architect of Lisbon, believed to have been the original designer of the monastery of the Batalha, in Portugal.

DAVID HACKET. Of Ireland, the architect who commenced the chapel of the founder at the Batalha.

ALAN DE WALSINGHAM. Sacrist and prior of Ely. Architect of the magnificent octagon,† and probably of the Lady chapel, of Ely cathedral.

\* "At the time of the foundation of the building, no fewer than forty architects, sculptors, and painters came from Florence and Siena, to settle in Orvieto, where they were formed into a corporate body, each division of which had a separate head, though all were subject to Lorenzo Maitani, the master of masters, who, with his council, pronounced judgment upon the models and drawings presented to them in the Loggia, a building set apart for the purpose near the Duomo."—Perkins, *Tuscan Sculptors*, vol. i., p. 89.

† "The central part of" Ely cathedral "is perhaps the most beautiful and original design to be found in the whole range of Gothic architecture. In the year 1322 the old Norman tower that crowned the intersection of the nave and transepts fell down, and was rebuilt under the superintendence of Alan de Walsingham, at that time the sacrist. He, and he only of all the architects of Northern Europe, seems to have conceived the idea of getting rid of what in fact was the bathos of the style—the narrow, tall opening of the central tower, which, though possessing exaggerated height, gave neither space nor dignity to the principal feature. Accordingly he took for his base the whole breadth of the church, north



In the latter work he was under the superintendence of John of Wisbeach.

**WILLIAM OF WYKEHAM.** Bishop of Winchester, and an accomplished architect. He altered the nave of Winchester cathedral from its original simple Norman design to its present state, by a simple cutting away and casing on the old masonry. Other buildings are attributed to him, amongst which are the college of Winchester and New College at Oxford, both founded by him, and certain portions of Windsor castle.\* A master mason, of the name of William de Wynford, was employed by William of Wykeham on several of his buildings, but whether he aided in their designs is not known.

**WILLIAM READE.** Bishop of Chichester, and one of the most profound mathematicians of his day. He is believed to have studied architecture, and to have designed the buildings for the library he founded at Merton College, Oxford, and the castle he erected at Amberley, Sussex.

#### FIFTEENTH CENTURY.

**FILIPPO BRUNELLESCHI.** Architect, of Florence, who constructed the dome of the cathedral of St. Maria del Fiore. He commenced several other important works, which, unfortunately, he did not see completed; amongst these are the palazzo Pitti, and the churches of St. Spirito and degl' Angeli. At Fiesole he built, by the order of Cosmo de Medici, the

and south, including the ailes, by that of the transepts with their ailes in the opposite direction. Then cutting off the angles of this large square, he obtained an octagon more than three times as large as the square upon which the central tower would have stood by the usual English arrangement. This octagon was next covered with the only Gothic dome in existence, though Italian architects had done the same thing, and the method was in common use with the Byzantines."—Fergusson, *Handbook of Architecture*, pp. 869, 870.

\* "[A.D. 1367–1404.] **WILLIAM OF WYKEHAM**, the magnificent prelate who, of all the bishops of Winchester, has most closely associated his name with his episcopal city and its cathedral, was born in 1324, most probably in the little village of Wykeham, near Tichfield; though even this is doubtful. Of his parents, and their position in life, nothing is known beyond their Christian names, John and Sybilla. Their son was patronised at an early age by Nicholas Uvedale, Governor of Winchester Castle, who educated him at Winchester and Oxford, presented him to Bishop Edingdon, and at the age of 22 (in 1346) to Edward III. At this time Wykeham's great qualification for court favour—besides a comely person and a ready wit—was his skill in architecture, of which the king speedily availed himself. Wykeham was the great architect and engineer of that warlike reign; and for the next twenty years was constantly employed in designing and directing the buildings and defences of the various royal castles. For seven years he superintended the great works of Edward III. at Windsor, where the eastern ward, or bailey, containing the college of the newly-established Order of the Garter, was built from his designs. This work was the real foundation of Wykeham's fortunes; who signified as much by an ambiguous inscription on one of the towers—'This made Wykeham.' The castle of Queenborough, in the Isle of Sheppy, was entirely designed by him; and those of Winchester, Porchester, Wolvesey, Leeds, and Dover were all fortified, enlarged, and repaired by his master-hand. . . .

"The first stone of New College, in Oxford, was laid by him in 1379, and the buildings were completed in 1386. . . . In 1387 the college at Winchester—intended as an introduction to that at Oxford—was begun, and completed in 1393. . . . In 1394, the year after the completion of the Winchester College, Wykeham commenced his works at the cathedral."—*Handbook to the Cathedrals of England* (Winchester Cathedral). Murray, 1876.

abbey of the regular canons, and at Milan he executed some works for the duke and at the cathedral. He also designed, for Cosmo de Medici, a magnificent palace, which was not carried out on account of its extravagance. Milizia says—"Brunelleschi had a noble mind, an elevated talent, and an excellent heart. He was much esteemed in his own country, where he was elected a magistrate; but his worth was never so well understood as after his death. He was then universally regretted, and was buried with pompous ceremony at the church of Santa Maria del Fiore." He died in 1444. He may be said to have been the first mediæval architect who turned his attention to the revival of Classic architecture, which he studied at Rome.

MICHELOZZO MICHELOZZI. Architect, of Florence, and one of the most skilful of his day. He constructed for Cosmo de Medici a palace, now palazzo Riccardi, the palazzo Cafaggiuolo, at Mugello, and the villa Medicea di Careggi, now Orsi. The palazzo Tornabuoni, now Corsi, is another of his works in Florence. He erected the monastery and church of St. Marco; Noviziata della Santa Croce; library of the monastery of the Black Benedictines, at Venice; the citadel, at Perugia; and numerous other works in the important towns of Italy.

GIULIANO DA MAJANO. This architect succeeded Brunelleschi at the dome of the cathedral of Florence. He erected the palazzo del Poggio Reale, at Naples; palace and church of St. Marco, and some additions to the Vatican, at Rome; and numerous lesser buildings at Naples, Loreto, and elsewhere. He was held in high repute by Pope Paul II. and king Alphonso of Naples, which latter ordered his funeral to be of a public character, and erected a marble tomb to his memory. He died in 1447.

ANDREA CICCIONE. Architect, of Naples. He erected the church and monastery of Monte Oliveto, now St. Carlo Borromeo; the church of St. Marta; portal of the church of St. Lorenzo; and the palace of Bartolomeo, of Capua, now Ercolensi. He died in 1455.

BACCIO PINTELLI. A Florentine architect, who was largely employed by Pope Sixtus IV. He erected, in Rome, the church and monastery of St. Maria del Popolo, the Sistine chapel in the Vatican, and the churches of St. Agostino, St. Sisto, and St. Pietro in Vincola; the hospital of St. Spirito, in Sassia; and the palace for the Cardinal del Rovere, in Borgo Vecchio. He repaired the church and monastery of St. Francesco, at Assisi; and is believed to have designed the palace of the Duke Federigo Feltre, at Urbino.

LEON BATTISTA ALBERTI. Architect, of Florence, celebrated for his profound learning in literature, science, and art. His more important architectural works are the churches of St. Sebastiano and St. Andrea, at Mantua; the church of St. Francesco, at Rimini; and the choir and tribune of the church of St. Annunziata, the palazzo Rucellai, and the gate and Corinthian loggie of St. Maria Novella, at Florence. He was also employed by Pope Nicholas V. to make alterations in the papal

palace, to repair the Aqua Virgo, and to decorate the fountain of Trevi. He died in 1472.

**ARISTOTILE ALBERTI.** An architect of Bologna, sometimes called Ridolfo Fioravanti. He appears to have been highly skilled in mechanics and engineering, as well as architecture. In Bologna, he removed the campanile of St. Maria del Tempio to a place about thirty-five feet distance; and moved the campanile of a church, at Cento, from an inclination of about five feet to a vertical position. He rebuilt a bridge over the Danube, in Hungary; and is believed to have been the architect of the Kremlin, and the church of the Assumption, at Moscow.

**PIETRO LOMBARDI.** Architect, of Venice, who designed the tomb of Dante and its chapel in the church of St. Francesco; the clock tower to the cathedral of St. Mark; the church of St. Maria de' Miracoli; additions to the ducal palace, and several other works at Venice. He also erected the cathedral at Cividale del Friuli; and a cloister in the monastery of St. Giustina, at Padua.

**SULPICE VAN VORST.** Architect, of Louvain, who designed and commenced the construction of the church of St. Sulpice, at Diest (1419); and designed a building in the Grande Place, at Louvain, for the town council (1438), which is now modernised, and contains the council chamber, reception rooms, and secretary's offices. He was succeeded on this work by J. Kildermans, under whose direction it was completed.

**MATHIEU DE LAYENS.** Architect, of Louvain, who designed the Hôtel de Ville of that place (1448-67). He also designed the lofty tabernacle in the choir of the collegiate church of St. Peter, at Louvain: he succeeded his master, S. Van Vorst, and finished the church of St. Sulpice, at Diest; he designed the baptistery and the altar to the Virgin in the church of St. Leonard, at Léau; and the choir of the church of St. Waltrude, at Mons (1450).

**P. APELEMAN.** First known architect of the cathedral of Notre Dame, at Antwerp (1400-34); he was succeeded by J. Tac, and after him followed Master Everard (1449), Herman de Waghemakere (1474), and his son (1502-41), under whom the works were completed.

**JOHN VAN RUYSBROECK.** A native of Ruysbroeck, and architect of the tower of the Hôtel de Ville, at Brussels; and the church of SS. Peter and Paul, at Anderlecht.

**JUAN ALONSO.** A Spanish architect, who designed the sanctuary church of the monastery, at Guadalupe, and constructed the castle of Mouraon, in the Alemtejo.

**RICHARD BEAUCHAMP.** Bishop of Salisbury, and highly skilled in architecture. He erected the great hall and some other portions of the episcopal palace, at Salisbury, and his own richly-adorned chantry chapel in Salisbury cathedral (now destroyed). In 1477 he was installed dean of Windsor, and was appointed by king Edward IV. master of the architectural works there in progress, including the rebuilding of St. George's



chapel. For his architectural skill and his services at Windsor he was appointed the first Chancellor of the Order of the Garter.

JOHN ASHFIELD. An English architect, who was appointed master of the works at Bristol cathedral about the year 1473. He was succeeded by prior John Martyn.

JOHN DRYELL OR DAYELL. An English architect, who superintended the construction of All Souls' College, Oxford, of which he was a fellow. He was succeeded by another fellow, warden Roger Keyes, who had previously superintended the erection of Eton College, Berkshire.

WILLIAM HORWOD. Designated "mason," and the architect who erected the tower, nave, and ailes of the collegiate church of Fotheringay, Northamptonshire.

Throughout the present article we have endeavoured to bring together, in a condensed form, materials from which our readers can draw tolerably accurate conclusions with reference to the standing and duties of architects in classic and mediæval times; and, as we have before remarked, it is with this view that so many architects' names and their works have been enumerated in its pages.

As we enter the sixteenth century, however, we closely approach the field of modern architecture and architectural practice; and it is quite unnecessary for the purposes of this article to continue our list of architects. The student who desires to go further will find a tolerably complete catalogue of the leading architects of the sixteenth, seventeenth, and eighteenth centuries in *The Lives of the Celebrated Architects, Ancient and Modern*, by Francesco Milizia, and in Gwilt's *Encyclopedia of Architecture*.

Chiefly alluding to the occupations of the architect of the sixteenth century, a writer in the Dictionary of the Architectural Publication Society, remarks:—"A great point of difference between the architects of classic and mediæval times, has appeared to several writers to have been that arithmetical systems were pursued by the first, while the use of descriptive geometry influenced the practice of the latter. Until the death of M. A. Buonarotti (1559), or perhaps a little later, the professor of pure geometry, whether also architect, painter, sculptor, or theologian, was employed as a civil and military engineer. After that time the competition became so great, that as previous practical employment was the chief recommendation when works of fortification, hydraulics, or machinery were in question, those occupations were no longer combined.

"At the end of the sixteenth century the land-surveyor began to claim a position independent of the architect, who was thus restricted to be an artist (sometimes also, as previously, a painter and sculptor), and designed edifices which were executed under his inspection, if he were possessed of an official station, or if he were the master builder, but which were almost as often executed by others without his superintendence. This was chiefly the case in the sixteenth and two following centuries, when a resident clerk of the works, as he would now be called, was employed to fulfil all

the duties of the architect except that of giving the first design : thus in the instance of Heriot's Hospital at Edinburgh, supposed to be the design of Inigo Jones, William Aytoune bound himself in 1631 to the governors, to 'devyse, plott, and sett downe quhat he sall think meitest for the decorment of the said work and pattern thereof, and alreddie begun, where any defect beis fund, and to mak with his awin hands the haill mewildis as weill of tymber as of stane, and prosequite and follow foorth the modell fram and building of the said wark.' The existence of these surveyors rendered the condition of master builder as a monopolist almost impossible : even so late as the year 1800, the architect laid his drawings before a meeting of the several masters of each trade whom he was about to employ, and discussed with them the whole division and arrangement of the work, a custom which produced the manner in which specifications are still drawn up. The architects at the end of the eighteenth century in England being, almost without exception, more or less openly contractors for the execution of their works, induced the competition of builders who designed for themselves ; which was accompanied by bad work and worse taste, followed by the system of large contracts."

At the present day the duties of the architect may be more clearly and uniformly defined : they differ in many respects from those of the ancient, or indeed the mediæval architect ; but in no essential point should his skill and acquirements fall much below the standard of excellence so clearly laid down by Vitruvius. As architecture is both a fine art and a science, its true professor must invariably possess a fertile imagination, artistic culture, extensive archæological knowledge, profound scientific and mechanical skill, and a knowledge of all the ornamental and decorative arts. (See *Architecture*.)

The ordinary duties of the modern architect are, firstly, to receive the instructions of his employer relative to the contemplated work, and to transfer these instructions to designs which shall display artistic feeling and beauty both in proportion and ornamentation ; convenience and fitness in arrangement of the several apartments and offices, with a view to comfort and health ; and true economy and scientific knowledge in the employment, dimensions, and disposition of all the building materials contemplated to be used in the structure. Secondly, to prepare a full description or specification of the modes in which all portions of the work are to be executed by the several trades : in this he must show a comprehensive knowledge of all the building trades, and the different qualities and properties of the materials used, and the several modes of manipulating them. Thirdly, he has to superintend the construction of the building, by carefully inspecting the same during its progress from the laying of the foundation to the cleaning down of the finished structure. And, lastly, to check and pass all the builder's accounts ; adjudging the amounts which have to be paid for any works executed over and above those undertaken to be executed by the original and accepted contract. That all these duties may be satisfactorily and perfectly executed, it is obvious

the architect must be a true artist, a skilful draughtsman, a mathematician, a person endowed with considerable scientific knowledge, a mechanician, an arithmetician, a man of probity, and a gentleman.

**ARCHITECTONIC.** The word commonly applied to any branch of the theory of architecture, and used in contradistinction to *Architectural*, which, properly, is applied to the practice of architecture.\*

**ARCHITECTONICS.** The term employed to designate the entire science or theory of architecture.

**ARCHITECTURAL.** The word usually applied to any portion of the practice of architecture, and in contradistinction to *Architectonic*, which designates anything relating to the theory only.†

**ARCHITECTURE.** The combined art and science which has for its chief aims the designing and construction of buildings for the habitation and use of man, in which utility, strength, and beauty shall be clearly manifest. Architecture has been justly designated the "Queen of the Arts," for not only does it require more comprehensive knowledge and more varied acquirements on the part of its professors than any of the other fine arts, but it excels all the other arts in its gifts to and its beneficial influence upon mankind. In its most restricted and general sense it has been described as the "art of building." Architecture is certainly the art of building, but, on the other hand, the art of building is not of necessity architecture; the mere piling together of stones or bricks, however scientifically adjusted, is not architecture in its true signification, for the result may show neither a fit and harmonious arrangement of parts nor imagination and beauty in design and detail, without which elements architecture, as a fine art, cannot exist.

As a fine art, architecture requires on the part of its professor the full exercise of a fertile imagination and refined taste in all matters of form, proportion, and colour, under the control of a well-balanced judgment, having for its basis the study of all the great works of antiquity, of the middle ages, and of modern times, an extensive acquaintance with archæology, and a knowledge of the peculiarities and capabilities of the several building materials, so far as their artistic treatment may be affected. As a fine art, architecture is worthy in the exact ratio to the amount of proportion, harmony, and beauty it displays, all of which elements are rendered fit and stable by a necessary amount of scientific

\* "ARCHITECTONIQUE (adj. des deux genres), du latin *architectonicus*, qui vient lui-même du grec, signifie qui appartient à l'architecture. On dit un procédé, une découverte, une dissertation *architectonique*."—Quatremère de Quincy. *Dict. Histor. d'Arch.*

† "ARCHITECTORAL, adj. m. On se sert de ce mot dans la langue pratique de l'architecture, pour exprimer une des nombreuses opérations mécaniques qui ont lieu dans la confection des édifices. Ce mot est le même que le mot latin *architectoralis*."—*Ibid.*



skill in the selection, combination, and adjustment of materials. True architecture shows forth its art freely, but seeks not to display its science.

As a science, it demands on the part of its professors proficiency in mathematics, skill in mechanics, and a knowledge of optics, acoustics, chemistry, hydraulics, geology, and the laws relating to heating and ventilation. They must also be thoroughly conversant with all the processes employed in the treatment and manipulation of the different building materials, and with all the materials and processes connected with decorative work.

"Architecture is to a certain extent imitative of certain prefigurations; the cavern, the tent, the cabin, and other types, have left indubitable traces in various national styles. As a science, it has been influenced, in every age and country, by the varying circumstances of material, climate, and mechanical skill; while as a fine art, it has been modified, in common with others, by the different accidents of civilization, social and political condition, religious feeling, and geographical position: but its constant object, however pursued, has always been to supply suitable habitations for mankind, appropriate edifices for public purposes, worthy temples for religious worship, and enduring monuments commemorative of national glory.

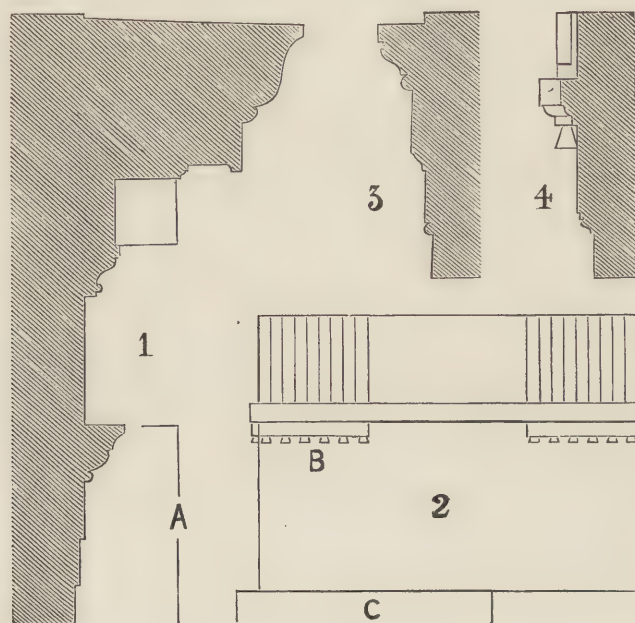
"Sound architecture masks and disguises nothing; it accepts willingly whatever conditions are imposed, and deals skilfully with obstacles and difficulties, as fortunate accidents and rare opportunities for the exercise of ingenuity and the attainment of happy effect. It treats the necessities of plan and construction as framework to be filled with appropriate ornamentation, or rather as rough materials to be moulded and fashioned to artistic beauty, and invested with the charms of imagination and poetic feeling, guided by strict propriety and correct taste. Although imposing dimensions and profusion of ornament may produce splendour, and the hardness of conception, shown in the skilfully balanced vault may create magnificence, yet, without excessive size of materials, or difficulty of construction, grandeur may be obtained in unison with pleasing simplicity, harmonious proportion, and elegant ornament; but these results depend upon the existence of a proper ratio of the several component parts, which is as essential in the works of architecture as in those of any other art."\*

**ARCHITRAVE.** A term compounded from the Greek word ἀρχὸς, chief, and the Latin word *trabs*, a beam. It is used to designate the beam which rests horizontally on the abaci of the columns, in Classic architecture. The architrave is therefore the lowest of the three main horizontal divisions of an entablature, as at A, Fig. 1, from the Ionic temple of Bacchus, at Teos. Vitruvius terms this portion of an entablature the **EPISTYLIIUM**.

The treatment of the architrave differs in the several Orders, and is

\* *Dict. of Arch.*, Arch. Pub. Soc. Lond.

as a rule more severely designed in Greek than in Roman examples. The simplest form is that of the Grecian Doric, as in the temple of Theseus (Fig. 2), the temple of Minerva, the Propylæa, and the Doric



Portico, at Athens.\* This description of architrave consists of a single facia, finished along its upper edge with a projecting member, called the tenia; under this, and as it were in continuation of the triglyphs of the frieze, are placed the regulæ, with their guttæ, or drops, B, Fig. 2. At C, the abacus of the angle column is indicated. In the Roman Doric, the architrave is also met with plain, but of much less proportionate depth than that of the Grecian entablature, as in the orders of the theatre of Marcellus, at Rome, and the temple of Apollo, at Cora. The latter example has its architrave rather less than one-third the diameter of the column. This entablature, taken altogether, shows combined Greek and Roman influence; for instance, the extreme triglyphs are placed at the angles, as in the Athenian examples; the guttæ under the regulæ are, on the other hand, clearly Roman, both in their extreme length and marked conical form. Speaking of the Grecian Doric architrave, Nicholson truly

\* Texier, in his *Description de l'Asie Mineure* (Paris, 1837), gives an illustration of a case at Assos where the Grecian Doric architrave is ornamented with sculpture. We know of no other example.

observes : \* — “ In the epistylum or architrave of the Grecian Doric Order, the guttæ, or drops, are frustrums of very acute cones approaching nearly to cylinders, and the height of each frustrum or drop never exceeds three-fourths of the diameter of its base ; but in the epistylum of the Roman Doric, the heights of the conical frustrums or drops are never less than the diameter of their base, and are always from cones whose vertical angle is very obtuse. In the Grecian Doric, the tenia of the architrave is always in one plane ; but in the Roman Doric, the tenia of the architrave under the triglyph projects forward beyond those parts of the tenia under the metopes.” In certain Roman examples the architraves are formed of two faciæ, the upper projecting over the under, and having a moulding or small enrichment at its lower edge, as in the Order found at Albano, near Rome (Fig. 4), and in that which existed in the baths of Diocletian, at Rome,† where a twisted member or rope-moulding divided the faciæ.

In the Ionic Order, a perfectly plain architrave obtains in the temple on the Ilissus, at Athens ; but the characteristic architrave of the Order is that of the temple of Bacchus, at Teos (A, Fig. 1), the temples of Minerva Polias, at Athens and at Priene, and the Erechtheium, at Athens. In all these examples the architrave is formed of three faciæ, surmounted with an enriched moulding of considerable projection. In the Roman treatments of this Order, as in the theatre of Marcellus and the Colosseum, the three faciæ obtain, but they are not all vertical on their faces ; the middle and upper faciæ of the Colosseum example incline inwards towards their upper edges, whilst the corresponding faciæ of the architrave in the theatre of Marcellus incline outwards. By the latter treatment the architrave gains considerable projection, and the frieze is thrown so far forward as to be in line with the abacus of the capital below. In the former example, the extreme projection of the architrave, caused by three vertical or outward inclined faciæ, is prevented, and the frieze is kept in line with the lowest facia, which is vertical. In the elaborate entablature of the temple of Fortuna Virilis, at Rome, the architrave has three narrow faciæ, all inclined inward, and an extremely heavy moulding above ; the middle facia carries a projecting bead-and-reel enrichment a little above its centre.

In the Corinthian Order the architrave has almost invariably three faciæ, surmounted with a projecting moulding. The architraves of the only examples of the pure Grecian varieties which are known, namely, the Choragic Monument of Lysicrates, and the tower of Andronicus Cyrrhestes, or “ tower of the Winds,” have no enrichments. The faciæ of the former have very slight projections, and incline inward towards their upper edges, so that the frieze does not overhang the lower

\* *The Principles of Architecture*, by P. Nicholson. London, 1841.

† The remains of the Albano Order and those in the baths of Diocletian are said to no longer exist.



edge of the *facia* which rests on the abaci of the columns. In the tower of the Winds, the *faciæ* are vertical, and very slightly project over each other. An exception to the usual form of architrave is presented in the Order of the Pantheon of Hadrian (sometimes, although incorrectly, called the temple of Jupiter Olympius); here two plain vertical *faciæ* are used. This building, although erected in Athens, was evidently designed by a Roman architect. The more important Roman examples of the Corinthian Order, namely, those of the temple of Jupiter Stator and the Pantheon, have architraves of three *faciæ*, the middle and upper having mouldings at their lower edges. That of the portico of the Pantheon has plain mouldings throughout, and the *faciæ* incline inward, to counteract the great projections caused by the mouldings. This architrave is given in the section, Fig. 3. In the architrave of the temple of Jupiter Stator, all the mouldings and the entire surface of the middle *facia* are richly ornamented.

In the Composite Order the architrave does not differ in any essential point from that of the Corinthian. In one of the most representative examples, that of the Arch of Titus, at Rome, the architrave is very similar to the architrave of the temple of Jupiter Stator, having all its mouldings enriched, but its middle *facia* is left plain.

Of the Tuscan Order no ancient example has been spared to us, so we are compelled to refer to the description given by Vitruvius, who speaks of the architrave as being formed of coupled beams of wood,\* and therefore it was probably perfectly plain on its face. In speaking of circular temples in the Tuscan style, he merely tells us that the architrave is half a diameter in height.

In the most ancient buildings the architraves were constructed of large stones, which spanned from the centre of one column to that of another, but in later Roman buildings they were frequently constructed of several stones joggled together, or slightly wedge-shaped, and fitted so as to practically form a flat arch. These expedients have been largely adopted by modern architects.

The term Architrave is also used to designate the ornamental band, formed of *faciæ* and mouldings, which is carried round a door, window, or other opening, upon the vertical face of a wall. This may be formed of any materials and in any fashion the taste of the architect may direct, as it is strictly a decorative feature. Vitruvius gives directions for proportioning the architraves (which he calls *antepagmenta*. See *Antepagmentum*) of the doorways of temples, in the sixth chapter of his fourth book, to which the student should refer if he desires further information on the subject.

\* "Over the columns coupled beams are laid of such height as the magnitude of the work may require. Their width must be equal to that of the hypotrachelium at the top of the column, and they are to be so coupled together with dovetailed dowels as to leave a space of two inches between them."—*Vitruvius*, lib. iv., cap. vii., Gwilt's translation.

**ARCHIVIUM OR ARCHIVUM.** The late Latin term for a room or receptacle in which archives or records were kept. The term is also found in old writings, in the following forms: *ARCEPS*, *ARCHARIUM*, *ARCHIBUS*, *ARCIBUM*, and *ARCIVUM*.

**ARCHIVOLT.** The term employed by English architects to designate the ornamental band, usually consisting of *faciæ* and projecting mouldings, carried round an arch, upon the face of a wall. The archivolt is usually worked on the *voussoirs* of the arch, and is strictly an ornamental feature. It rests, at its extremities, upon the *abaci* of the columns, the impost mouldings, or the plat-band, from which the arch springs; and it is frequently divided in the centre by an ornamental or simply projecting key-stone. Examples of archivolts springing direct from capitals of columns are met with in early Romanesque architecture, as in the church of St. Clemente, at Rome (fifth century), and in later works, as in the cloisters of St. Paolo fuori delle Mura, at Rome (twelfth century). Examples of archivolts springing from entablatures placed on capitals, as in the church of St. Spirito, at Florence (fifteenth century), and on imposts and plat-bands, are very numerous. The archivolt, as understood by English architects, is almost exclusively met with in Etruscan, Roman, Byzantine, and Renaissance architecture. The term cannot be correctly applied to the arch mouldings met with in Gothic architecture. (See *Arch Mouldings*.) The French architects do not, however, draw any distinction in the application of the term, and use it alike for the simple archivolts of Classic architecture and the elaborate mouldings of the pointed styles.\*

**ARCHIVOLTUM.** The late Latin term for a vault, an arched cesspool, or an arched drain or sewer.

† "Teneantur reparare et facere *Archivoltum*, seu receptaculum subtus terram quod excipiat omnem spurcitiam," &c.—Jus Vicentinum, lib. iv. ap. Ducange.

"Et supra quodlibet studium erit unum modicum et securum *archewote*."—Cont. for Durham Dorm., 1398. Hist. Dunelm. Scrip. tres, p. clxxxj.

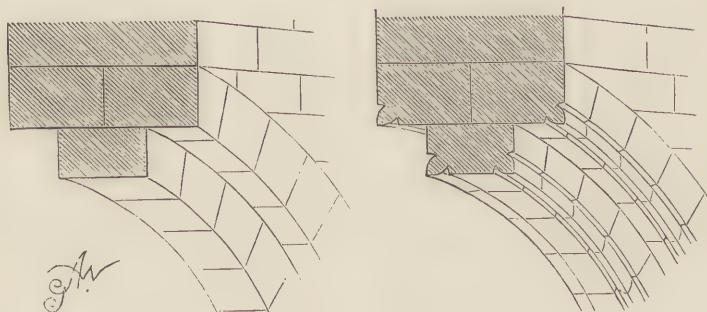
"Pro singulis lectis monachorum faciet idem Petrus in utroque muro fenestras correspondentes, cum securis *archevoltis* supra se."—*Ib.*, 1401. Hist. Dunelm. Scrip. tres, p. clxxxviii.

**ARCH MOULDINGS.** The collections of concentric mouldings which are the chief decorative features in the arches of all the styles of mediæval architecture. Romanesque and pointed Gothic arches are usually constructed of two or more orders of *voussoirs*, placed as indicated in Fig. 1, and these are, except in very plain and early examples, enriched by

\* "ARCHIVOLTES. Ce sont les arcs qui sont bandés sur les piles des nefs ou des cloîtres, sur les pieds-droits des portails, des porches, des portes ou des fenêtres, et qui supportent la charge des murs."—M. Viollet-le-Duc, *Dic. Rais. de l'Arch. Française*, vol. i., p. 46.

+ Quoted in *Glossary of Architecture*, vol. i., p. 47.

mouldings and carved ornaments. The simplest mode of enrichment is shown in Fig. 2, and is similar to that of the chancel arch, Great Haseley, Oxfordshire.



1

2

Descriptions of the characteristic arch mouldings met with in the several styles or periods of mediæval architecture are given in the articles devoted to those styles and to the different forms of arches.

**ARCH OF TRIUMPH.** A term employed to designate the arch which divides the choir or chancel of a church from the nave; or the arch which marks the western boundary of the presbyterium, sacrarium, or apse of a basilica. It derived its name from the painting of the Glory or Triumph of Christ, which commonly occupied the wall space between it and the roof of the nave. (See *Glory*.) This arch is termed in late Latin *ARCUS ECCLESIE*, *ARCUS PRESBYTERII*, and *ARCUS TRIUMPHALIS*.

For a description of the arches of triumph erected by the Romans and others, to commemorate great victories, see article *Triumphal Arch*.

**ARCH-STONE.** A voussoir, or wedge-shaped block of stone, used in the formation of an arch. (See A, Fig. 3, article *Arch*.)

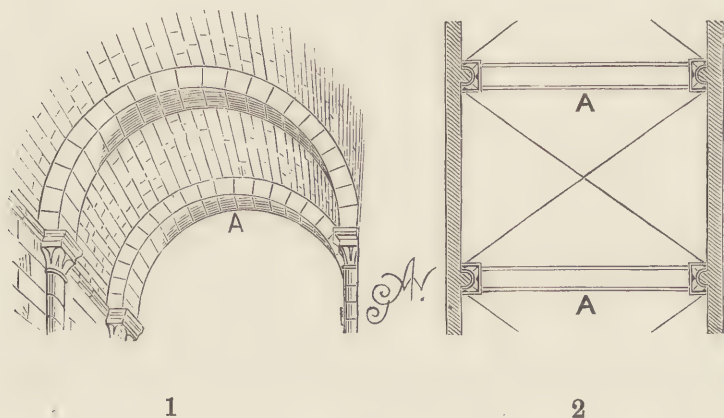
**ARCHWAY.** The term commonly applied to an arched opening in a wall, usually in the ground floor of a building, through which entrance is made or passage-way is secured. It is also applied to a short passage covered with a vault.

**ARCOSOLIUM.** A word derived from the Latin *arcus*, an arch, and *solum*, a sarcophagus, and commonly used to designate an arched recess, or chamber, in a catacomb, used as a burial place.\* (See *Catacomb*.)

\* "ARCOSOLIUM. This word is derived by Martigny (*Dict. des Antiq. Chrét.*) from 'arcus,' an arch, and 'solum,' which according to him is sometimes used in the sense of sarcophagus. Some inscriptions, and particularly one now in the cortile of the Palazzo Borghese (Marchi, *Mon. delle Arti Christ. primit.* p. 85), which runs thus, 'Domus eternalis Aur. Celsi et Aur.



**ARCS DOUBLEAUX.** (*Fr.*) The term employed by French architects to individualise the main ribs which span from wall to wall and divide a vault into compartments, or severeys, as at A A, Figs. 1 and 2.



The only English equivalent for this term is ARCH BANDS, but it is both inexpressive and unsatisfactory; it would certainly be more correct to term the ribs either *arched bands* or *vault bands*.

Professor Willis, in his *Architectural Nomenclature of the Middle Ages*, justly observes:—"For the ribs of the vault we have only the nomenclature of Delorme. He calls mediæval architecture *modern work*, and says, 'Auiord'huy ceux qui ont quelque cognoissance de la vraye architecture ne suivent plus ceste façon de voute appelée entre les ouvriers La mode Françoisse laquelle veritablement je ne veux despriser, ains plustost confesser qu'on a faict et pratiqué de fort bons traicts et difficiles.' The ribs according to him were *branches*, and were termed according to their positions, *croisée d'ogives*, *liernes*, *tiercerons*; *formerets*, which lie next to the wall, and are only half the size of the others; *arcs doubleaux*, which separate the compartments of the vault, and are thicker than the others."

M. Viollet-le-Duc, in addition to the ordinary signification, uses the term to designate the arches which span the ailes, from the piers to the lateral walls, for the purpose of supporting transverse vaults, as in the

*Claritatis compari mees [leg. comparavimus] fecimus nobis et nostris et amicis arcosolio cum parieticulo suo in pacem,* make mention of it, and it has been supposed to denote those tombs hewn in the living rock of the catacombs at Rome (and elsewhere), in which there is an arched opening above the portion reserved for the deposition of the body to be interred, the grave being dug from above downwards into the reserved portion below the arch. There seems, however, some reason for doubting whether the attribution of the word is correct, and whether we ought not rather to understand by it the sepulchral chambers or cubicula in which the great majority of these tombs are found. . . . The word may really be derived from 'arca,' a sarcophagus, and 'solium,' which among other meanings has that of a piscina or reservoir in a bath, and in mediæval Latin of a chamber generally; it may thus denote a vault containing sarcophagi.'—A. Nesbitt, F.S.A., in *Dict. of Christ. Antiq.*

abbey church of Fontenay, near Montbard, of which he gives an illustration in his dictionary.\* It has likewise been used by certain English architects to signify the soffits of arches,† an abuse which doubtless arose from the imperfect knowledge of the true signification of the term in strict French nomenclature.

**ARCUATION.** A term signifying the employment of arches in architectural design.

**ARCUS.** (*Lat.*) An arch or a bow. This word has been used by late Latin authors with several significations (Ducange, *Gloss.*); the most usual one is an arch, its correct signification, but it has also been applied to an apse of a basilica; to an entrance or large area in front of a basilica (Paulinus, *Epist.*, xiii. and xv.); and to an arched porch or gateway to a church (Bingham, *Opera*, vol. i., p. 291).

**ARCUS ECCLESIAE.** A late Latin term for the arch which divides the choir or chancel of a church from the nave. This arch has also been termed the **ARCUS CHORALIS** and **ARCUS TRIUMPHALIS**. (See *Arch of Triumph*.)

**ARCUS PRESBYTERII.** The late Latin term signifying the arch which marks the western boundary of the presbyterium or apse of a basilica. This has also been called the **ARCUS TRIUMPHALIS**.

**ARCUS TORALIS.** There appears to be some uncertainty about the correctness of this term; and Ducange holds it to be a careless writing of *arcus choralis*. The more general belief, however, is that it alludes to and takes its name from the hanging which frequently was suspended in front of the altar. Ducange explains the word *torale* to signify a hanging; and it is not unreasonable to suppose that the arch across which the hanging or curtain extended would take its name from it, and be called the *arcus toralis*, or the *arch of the curtain*. And Ducange quotes the authority of the Madrid Academy for the use of the term **ARCO TORAL**, signifying a principal arch. The arch of the curtain would of course be the principal arch in every church, dividing, as it did, the sacrarium from the inferior portion of the edifice. Gwilt, in his *Encyclopædia*, defines the term to be "the lattice separating the choir from the nave in a basilica;" but this is evidently a mistake. The lattice, which takes the place of the curtain, or *torale*, might acquire its name, but by no ingenuity could the term *arcus toralis* be correctly applied to a screen which is not an arch in itself.

**AREA.** A term derived from the Latin, now commonly applied to the

\* *Dict. Rais. de l'Arch. Française*, vol. i., p. 179.

† "Sir William Chambers, following James Gibbs, uses the term for the soffit of arches."—*Dict. of Arch.*, Arch. Pub. Soc., Lond.

space of ground upon which any structure is erected ; and is used to designate a court or any sunk portion about a building which is enclosed at the sides but open upwards to the air ; it is also frequently used in alluding to the superficial contents of any enclosed space. Thus, speaking of a court, or any enclosed space in a building, one might simply call them areas, without alluding either to their size or form ; but when one speaks of the area of a court-yard or the area of any large apartment, the term directly alludes to the superficial contents of those features.

Although the original signification of the word area, in the Latin language, is a threshing-floor, which was a raised place in a field where the wind had free access from all sides, it appears to have been often used by ancient authors in speaking of any large open space in a city, a plot of ground for building upon, a space in front of a temple, the court-yard of an important dwelling-house, the space in front of a mausoleum where the pyre was commonly placed, or the plot of ground on which monuments were erected.

**AREA DRAIN.** A narrow open space, constructed round the exterior of the basement walls of a building for the purpose of keeping the damp soil away from them. The soil is supported by the area wall, built at the proper distance, according to circumstances varying from one to three feet, from the basement walls. The area walls should, as much as possible, be kept distinct from those of the basement, so that damp may not be readily conveyed from the soil to the building proper ; arched cross walls have, however, to be used to secure necessary resisting power in the area walls, and these should be built of non-porous bricks set in Portland cement ; iron struts may be employed for the purpose. The bottom of the area must of course be channelled and connected with the drains, so that all moisture may be collected and immediately removed. Area drains are usually left open at the level of the soil.

**ARENA.** The central space or area of an amphitheatre, on which the gladiatorial and other displays took place. The arena derived its name from being covered with sand, which was distributed over its entire surface for the purpose of giving the combatants firm foothold, and for absorbing the blood shed in the encounters. The arena was surrounded by a wall, about fifteen feet high, called the *podium* ; this was sometimes surmounted with a metal railing, with projecting spikes (*ferrea clathra*), to render those seated above safe from the attack of the wild beasts often let loose on the arena. To make the spectators still more secure, a deep ditch (*euripus*) was sunk all round the arena in front of the podium. The podium had several doors pierced in it ; these opened into passages from the exterior, certain apartments for the use of the gladiators, attendants, &c., and the dens (*carceres*) in which the wild animals were retained until required. The arena was uncovered to the sky, and accordingly received the rain direct over its entire surface, and, in addition, received that which



poured from the awning (*velarium*) which was stretched over the seats of the spectators; it had, therefore, to be thoroughly drained. This was done by making the arena sufficiently convex to throw the water towards the surrounding wall, where it was received into a large drain; radiating drains at intervals conveyed the water from this to the great collecting drain which surrounded the exterior of the amphitheatre. (For further particulars, and the dimensions of the important ancient examples, see article *Amphitheatre*.)

The term has been used in later times with a different signification. Ducange shows, by a quotation, that it has been applied to the floor-space of the body of a church; and it has also been used by writers to signify the interior floor-space of a temple. In both these applications, however, the etymology of the word has been entirely overlooked, for at no time was sand a distinguishing feature of the floors of temples or churches. The term was probably used instead of the more correct word *area*, simply with the view of expressing a large unencumbered floor-space.

Vitruvius uses the terms *ARENA MARINA* for sea-sand; *ARENA FLUVIATICA*, river-sand; and *ARENA FOSSITIA*, pit-sand.<sup>1</sup>

**ARENARIUM.** The term used by Vitruvius for a sand-pit.<sup>2</sup> Bearing in view its original signification, late Latin writers have used *arenarium* to designate a grave or other place of burial. It has also been applied to an amphitheatre, in which the arena appeared as a sand-pit.

**ARENATUM.** (*Lat.*) The name given to the plaster, chiefly composed of lime and sand, applied to walls during their preparation for fresco or distemper painting. The finishing material, laid over the *arenatum*, was composed of pounded marble and lime; this was called *marmoratum*. Vitruvius gives particulars of the materials and methods of application of the several coats applied to walls and ceilings.<sup>3</sup> The Italians designate the sand and lime composition *ARRICCIATO*, and the Spaniards, deriving the term from the Latin, call it *ARENADO*. (See *Fresco Painting*.)

**ARES OR MARS.** In classic mythology, the god of war. According to the early legends he was the son of Zeus and Hera; a later legend makes him the offspring of Hera alone.

The representations of Ares are not numerous. He is universally treated as a warlike man, of strong muscular development, with a thick neck and short hair.<sup>4</sup> When fully armed he wears a cuirass and helmet,

<sup>1</sup> Vitruvius, lib. ii., caps 4 and 6.

<sup>2</sup> *Ibid.*, lib. ii., cap. 4.

<sup>3</sup> *Ibid.*, lib. v., cap. x.; lib. vii., caps. iii. and vi.

<sup>4</sup> "A compact muscular development, a thick fleshy neck, and short, disordered hair, seem to belong universally to the conception of the god. Ares has smaller eyes, somewhat more widely-distended nostrils, a less serene forehead than other sons of Zeus. With regard to age, he appears more manly than Apollo, the mellephebos; and even than Hermes, the epehebos among the gods—as a youthful man, whom, like almost all heroes, early art formed

and carries a round Argive shield and spear. His arms are, in some representations, carried by his attendant genii. In an ancient painting preserved in the museum at Naples, Ares and Aphrodite are depicted floating through the air, attended by two winged genii bearing arms. Ares is almost nude, only having a light drapery (chlamys) thrown over his shoulder, and a plumed helmet on his head. The loves of Ares and Aphrodite formed a favourite subject both for the artists and poets of antiquity.

The epithets of Ares were all significative of war. He was called the *Blood-stained* (μυαιφόνος); *Shield-borer* (ρίνοτόρος); *Man-slaying* (ἀνδρείφοντης); *Man-destroying* (βροτολοιγός), &c.\* In addition to these, several surnames were given to Ares; the following are the more important:—

**GRADIVUS.** The name given to the god, and derived either from his stateliness in marching, or his vigorous action in brandishing his spear. It was also given to him when he was roused and assumed a warlike attitude. A temple was erected, outside the city of Rome, to Mars Gradivus, the warrior and defender against external enemies.

**QUIRINUS.** "Name of Mars, from Curis or Quiris, a *spear*, which name was afterwards attributed to Romulus, because he was esteemed the son of Mars. Quirinus is the name of Mars when he is quiet, as is Gradivus when he rages."† A temple was dedicated to Mars Quirinus inside the city of Rome.

**THURIUS.** A name given to the god from his wild impetuosity in war.

**ULTOR.** The name given to Mars as the avenger. Augustus erected a magnificent temple in Rome, which he dedicated to Mars Ultor. This building was the result of a vow taken when he implored the assistance of

with a beard, improved art, on the contrary, without beard; the former representation, however, was also preserved in many districts and for many purposes.

"The drapery of Ares, where he does not appear entirely undraped, is a chlamys (a sagum). On reliefs in the archaic style he is seen in armour, in later times he retained merely the helmet. He usually stands; a vigorous stride marks the Gradivus on Roman coins; the legionary eagle and other signa, the Stator and Ultor (who recovered them); victories, trophies, and the olive branch, the Victor and Pacifer. Scopas sculptured a sitting Ares; he was doubtless conceived as reposing in a mild mood, which seems also to be the meaning of one of the chief statues extant" (the Ludovisi Mars), "in which a copy after Scopas is perhaps preserved to us.

"In groups the god of war seldom figures as a combatant; precisely because he is himself nothing else than war and strife, he gave no opportunity for the celebration of particular exploits by him. He only figures on gems as giant-slayer. On the other hand, we see him together with Aphrodite in groups of statues, which, in the posture of the bodies and disposition of the drapery, indicate a famous original. As this union of war and love was not always taken as a frivolous adultery, but was viewed in the more serious sense, Roman imperial consorts could also be glorified by such groups in statues and coins. The Romans liked to see the love of Ares for Ilia or Rea Silvia represented. In the treatment, Greek representations, especially the surprisal of Ariadne by Dionysus, were often laid as a groundwork."—Müller, *Ancient Art and its Remains*. Lond., 1852, p. 469.

\* Keightley, *The Mythology of Ancient Greece and Italy*. Lond., 1831, p. 82.

† Bell's *New Pantheon*, Quirinus, p. 208.

the god against the murderers of Julius Cæsar; and its construction was commenced on his victorious return.

The animals consecrated to Ares were the horse, on account of his vigour and use in war; the wolf, on account of his rapaciousness and blood-thirsty habits; and the dog, for his vigilance. The vulture, pye, cock, and woodpecker were believed to be favoured by the god.

The following are the important ancient statues of Ares in existence:—The Ludovisi Mars, Villa Ludovisi, Rome; Borghese Mars, Louvre; and Mars and Venus, Gallery at Florence.

**ARGENT.** The heraldic term for silver or white. This tincture is represented in sculpture and engraving by a perfectly plain surface, as in



the accompanying example. The extreme difficulty of protecting the natural metal against oxidation causes it to be little used in heraldic art; white, therefore, almost entirely takes its place.

**ARIES.** The ram. The sign of the zodiac which the sun enters about March 20th. It is commonly termed the vernal sign.

As we have already mentioned (*Aquarius*) the signs of the zodiac were frequently introduced in architectural sculpture and decorative art by the artists of the middle ages, usually associated with the emblems of the months, or representations of the several industrial occupations of man during the circle of the seasons. (See *Months, Emblems of, and Zodiac.*)

The sign was usually represented by a ram, either with or without the astronomical symbol. In the fine series of sculptures on the plinth of the northernmost of the three western portals of Amiens cathedral, the sign is a ram, walking in front of two leafless trees, which are evidently introduced in allusion to the opening of Spring, at which time the trees are bare, but receive the returning vitality which is destined to clothe them with verdure. The accompanying emblem continues this allusion; it represents a man digging about the roots of two plants, which are twisted round poles. In the series on the great west doorway of the cathedral of St. Mark, at Venice, the ram is finely carved, accompanied by the emblem of the month, an armed warrior, carrying a shield, charged with the lion of St. Mark, and a spear. His head is uncovered, and his



hair is disordered with the winds of March. At his feet is a child blowing a trumpet, symbolical of early Spring, and the blowing of its winds. In the series on the arch of the porch of the church of St. Margaret, at York, a ram is again used for the vernal sign, and its accompanying emblem appears to have been a man engaged in pruning a tree. The astronomical sign is shown in the adjoining cut; it is evidently a rude way of representing a ram's head, looked at from the front.



ARK. In mediæval art, the ark of Noah is commonly represented in the form of a boat, on which is constructed a house, roofed in the ordinary way, and having several windows, at which the heads of Noah and his family are depicted. The dove also appears in the generality of representations. The early Christian artists, who strove more to convey the historical fact than to attempt to give a practical rendering of the subject, treated the ark simply as a floating box, as in a sculptured sarcophagus found in the cemetery of St. Calixtus, in the Roman catacombs; here Noah appears standing in a square box floating on the waters; he stretches out his arms to receive the dove returning with the olive branch. Nothing could be more simple or could more directly tell the story of the deluge, the preservation of Noah, and the episode of the dove, than this naïve treatment of the subject. In the third panel of the celebrated bronze gates of the baptistery of Florence, the ark is represented as a large pyramid, with a single door and window: no boat is visible. The ark is resting on the ground.

The ark of the Covenant is frequently introduced in the stained glass of the middle ages, in which Old Testament scenes are delineated. It also appears in sculpture and painting. In the Ghiberti gates, above alluded to, the ark of the Covenant is represented in the eighth panel. It is in the usual form of a casket, with roof-like cover, carried by two side poles on the shoulders of four men.

In Christian symbolism, the ark of the Covenant is accepted as the emblem or type of the Virgin Mary; and as such it has sometimes been associated with her statues, as in the portal of the Virgin in the cathedral of Notre Dame, at Paris, where, over the original statue of the Virgin and Child, was placed a canopy containing a representation of the ark, in the form of a coffer. Speaking of this, M. Viollet-le-Duc says :—" L'Arche d'alliance occupe donc là une place symbolique, elle est comme le lien entre l'Ancien et le Nouveau Testament. Quelquefois l'Arche d'alliance affecte la forme d'une armoire à deux battants supportée ou gardée par des lions; d'une table d'autel avec reliquaire. Les sculpteurs ou les peintres du moyen âge ne paraissent pas avoir donné à l'Arche d'alliance de l'ancienne loi une forme particulière; ils se bornaient, dans leurs bas-reliefs ou leurs peintures, à figurer les objets qu'ils avaient continuellement sous les yeux,

les meubles, par exemple, qu'il était d'usage de placer aux côtés des autels, et où l'on renfermait les reliquaires, les chartes, et tous objets précieux ou titres qui constituaient le trésor d'une église."

The term **ARK** is employed to designate the recess constructed at the eastern end of a Jewish synagogue for the reception of the scrolls of the Law. This recess is usually approached by a flight of steps from the floor of the synagogue, and is furnished with doors and curtains. In certain modern synagogues, as those at Berlin; Berkley Street and St. Petersburg Place, London; and Prince's Road, Liverpool, the ark is an elaborate construction of marble and other materials, erected in advance of the eastern wall of the building. This method is, however, an innovation on the more ancient and orthodox formation.

The words **ARK**, **ARKA**, or **ARCHA**, have been used by several old writers for a chest or coffer containing money or valuables; hence, in some parts of England, the term ark has been applied to the chest used for holding meal or flour.

**ARMATURE.** (*Fr.*) The term used by the French architects to designate a combination of pieces of iron or wood employed for the purpose of consolidating or supporting any peculiar construction of stone or timber; and also those complicated arrangements of iron bars placed in windows for the purpose of supporting the stained glass. The armatures of large windows which are devoid of tracery are sometimes very complicated; specimens are to be seen at Chartres cathedral; but probably the most elaborate examples are those which support the glass in the two circular windows in the transepts of the church of Notre Dame, at Dijon. The arrangement of the iron bars here is geometrical, and cleverly adapted to the design of the stained glass.\*

**ARMED.** The heraldic term, applied to any beast or bird of prey when its horns, hoofs, beak, or talons are borne of a different tincture from that of its body.

**ARMENIAN ARCHITECTURE.** The early architecture of Armenia has not been at all fully studied by travellers, and there is no doubt that it is a study beset with difficulties, as the remains are few, and the dates of existing examples are very uncertain. Before the third century of the Christian era the style of architecture over the greater part of the country was strongly Persian in character, or at least showed a Persian influence, in which little marked originality on the part of the native builders displayed itself. About the year A.D. 261, Tiridates III. introduced a style

\* A detail drawing of these armatures is given in King's *Study Book of Mediæval Architecture and Art*, vol. i., pl. 63. In the same work, another description of armature, adapted to the large compartments of a rose window, is given in vol. i., pl. 3. (Transept rose, church of St. Yved, Braine). Drawings of the Dijon armatures and others are also given in *Dict. Rais. de l'Arch. Française*, vol. i., p. 462-466.

of architecture directly derived from classic art ; but it appears to have taken little hold in the country, practically dying with him (A.D. 314). After this period the Armenians are believed to have resumed a traditional style, in which a massive treatment, as regards the leading features, was combined with luxurious and profuse ornamentation, resembling to some degree the great works at Persepolis. This style became modified by the requirements and influence of the Christian religion ; and the churches of Armenia became examples of a distinct style of Christian architecture. This style was the result of a strong Byzantine influence upon the semi-Persian architecture which obtained in Armenia at the time, and on this account it has been designated the Byzantine-Persic, passing later on (early in the eleventh century) into a style known as the Byzantine-Armenian. Speaking of the Christian architecture of the country, Mr. Huggins remarks :—" In Armenia, Byzantine architecture shows strong traces of the Sassanian and Saracenic styles ; pillars became somewhat elongated, and the composition more pointed, which with other mutations, render it strikingly different from the European branches. The Persian or Sassanian elements, it is believed, are inherent in this branch, which is sometimes called Byzantine-Persic from its having had another parent in the style of the Persian empire, by which, in its generation or origin, the Christian-Romanesque was impregnated. This variety of Byzantine architecture is peculiarly elegant, both in its decorations and proportions. To it the pointed Gothic of the West was probably much indebted."\* Mr. Layard says :—" There are many interesting questions connected with this Armenian architecture which well deserve elucidation. From it was probably derived much that passed into the Gothic, whilst the Tatar conquerors of Asia Minor adopted it, as will be hereafter seen, for their mausoleums and places of worship. It is peculiarly elegant in its decorations, its proportions, and the general management of the masses, and might with advantage be studied by the modern architect. Indeed, Asia Minor contains a mine of similar materials unexplored and almost unknown . . .

"The architect, or the traveller, interested in the history of that graceful and highly original branch of art, which attained its full perfection under the Arab rulers of Egypt and Spain, should extend his journey to the remains of ancient Armenian cities, far from high roads and mostly unexplored. He would then trace how that architecture, deriving its name from Byzantium, had taken the same development in the East as it did in the West, and how its subsequent combination with the elaborate decoration, the varied outline, and tasteful coloring of Persia, had produced the style termed Saracenic, Arabic, and Moresque. He would discover almost daily, details, ornaments, and forms, recalling to his mind the various orders of architecture, which, at an early period, succeeded to each other in Western Europe and in England ; modifications of style for

\* *The Course and Current of Architecture.* Lond., 1863.



which we are mainly indebted to the East during its close union with the West by the bond of Christianity. The Crusaders, too, brought back into Christendom, on their return from Asia, a taste for that rich and harmonious union of color and architecture which had already been so successfully introduced by the Arabs into the countries they had conquered.

"This connection between Eastern and Western architecture is one well worthy of study, and cannot be better illustrated than by the early Christian ruins of Armenia, and those of the Arsacian and Sassanian periods still existing in Persia. As yet it has been almost entirely overlooked, nor are there any plans or drawings of even the best known Byzantine, or rather Armenian, remains in Asia Minor, upon which sufficient reliance can be placed to admit of the analogies between the styles being fully proved. The union of early Christian and Persian art and architecture produced a style too little known and studied, yet affording combinations of beauty and grandeur, of extreme delicacy of detail, and of boldness of outline, worthy of the highest order of intellect."\*

As it is impossible to treat adequately of the Christian architecture of Armenia without leading up to it by a review of Byzantine architecture, we shall not go further into the subject in this article, but refer the student to our article *Byzantine Architecture*, where the peculiarities of Byzantine-Persic and Byzantine-Armenian are briefly described.

**ARMENIUM.** A pigment used by the ancient artists, prepared from a variety of copper ore called *Lapis Armenus* (Armenian stone), from the country in which the finest quality was found. Its exact colour is a matter of some uncertainty, and much diversity of opinion exists among authors on the subject. Mrs. Merrifield makes the following observations:—"Much confusion has been occasioned by some authors describing the *Lapis Armenus* as a blue stone, while others say it is green. The fact is, that it consists of one of those ores of copper united with other substances, and that it is sometimes blue, sometimes green, and sometimes of a greenish blue. See Pliny, Book xxxv., c. 6. G. Agricola, *De Metallicis*, 219, 221, 452. Constant de Massoul's *Treatise on Painting*, and the *Composition of Colours*, 152, and *Bulengerius de Pictura, Sculptura, et Plastice*, Lib. ii., c. iii. Le Vieil (*De la Peinture sur Verre*, p. 108, n.) says, it is a stone of a lighter colour, not so heavy and more friable than ultramarine; it is found in France, Germany, and especially in the Tyrol. G. Agricola (p. 452) mentions, that 'he saw some Armenio in one shop only in Venice, and that the possessor valued it much.' The scarcity of the pigment is sufficiently accounted for by the provinces which produced it being in the hands of the Turks."† There can be little doubt

\* *Nineveh and Babylon*. Lond., 1853. pp. 8 and 32.

† *The Art of Fresco Painting*. Lond., 1846. p. xlvi.

that the *Lapis Armenus* of the ancients was blue carbonate of copper, in combination with lime or other earthy substance, the pigment being prepared by the simple process described by Cennino Cennini,\* namely, grinding and washing the ore to remove the stony particles from it, and finally grinding the pure carbonate into the desired pigment. Vitruvius evidently means armenium when he speaks of *crysocolla*; according to the text of Book vii., caps. v. and xiv., it is alluded to as a precious and natural green pigment, and there can be no doubt that it was prepared from native carbonate of copper.

**ARMET.** The name given to the perfected helmet (Ger. *Visier-helm*) introduced about the middle of the fifteenth century. This consists of a head-piece or crown, a globular iron cap with crest, which spreads out with a hollowed projection over the back of the neck. The front movable portion, called the mezail, consisted of a nose-piece, the vizor, pierced for sight, and ventail, or fan; these were secured to the sides of the head-piece by pivots, and could be raised up to the crest, exposing the upper part of the face when desired. The portion which covered the mouth and chin is called the mentonnière or beavor. Under all was attached the gorget or gorgerin, a sort of collar formed of a series of circular plates of steel, carefully arranged and connected in such a manner as to effectually protect the throat, and cover the junction between the helmet and the cuirass. (See *Helmet*.)

**ARMILLA.** (*Lat.*) An armlet or bracelet worn by the Romans of both sexes, and commonly by Greek women. Armillæ were usually of the precious metals, and formed in various devices; the most favourite, however, appear to have been those in the shape of snakes, termed by the Athenians ὄφεις (serpents or serpent bands). Several examples of these are still preserved in the museum at Naples and elsewhere, and are represented on statues, as that of the sleeping Ariadne, in the Vatican museum. In this instance the armilla is worn round the thick part of the arm, midway between the shoulder and the elbow; it is twisted round the arm twice, and the head of the snake lies on the arm towards the shoulder. Roman generals sometimes bestowed armillæ on their soldiers as marks of distinction for meritorious conduct in the field.

**ARMING POINTS.** The ties or straps and buckles attached to the several pieces of a suit of armour, for the purpose of binding them together while being worn.

**ARMINS.** The pieces of velvet or cloth securely fixed round the handles of halberds, ranseurs, partizans, spontoons, and such like weapons, to enable the hand to retain a firm hold, even whilst heated with exercise.

\* *A Treatise on Painting.* Lond., 1844.



**ARMORIAL BEARINGS OR ACHIEVEMENT.** A coat of arms fully emblazoned, with the shield exhibiting its correct quarterings and impalement, and with the proper accessories of supporters, helmet, coronet, crest, motto, mantling, etc. The lozenge-shaped achievements which are displayed on the exterior of the houses of persons deceased are generally termed **HATCHMENTS**.

**ARMOUR.** Defences, formed of skins of animals, padded cloth, leather, metal, or other materials, constructed to fit the figure, and worn as protections against missiles and the blows of weapons wielded by hand.

There can be little doubt that defensive armour of some sort was worn in the earliest ages of man, so soon indeed as offensive weapons were used. In all probability the first armour was simply of untanned skins of animals, rudely quilted together in two or more layers, and secured round the body with thongs. A protection for the head would be the chief thing sought after, and probably a thick quilted skin cap formed the pre-historic helmet; the cuirass, or protection for the body from the waist upwards, would naturally follow the head-piece. Even in Egyptian times, a quilted helmet and a quilted vest, or a cuirass formed of horizontal rows of plates of metal, or metal scales linked together or sewn to leather, were all the defences worn by the soldiers in addition to their large and favourite shields. From these remote epochs armour gradually developed until it reached its culminating point in the fifteenth century.

As all the parts forming a complete suit of armour are treated in their chronological development and more or less in detail throughout the pages of this Work, it is unnecessary to enter into the subject of armour, even in the briefest manner, in this article.

To assist the student who may be unacquainted with the names of the several portions of a complete suit of armour, we append the following list, which will enable him to refer readily to any of our articles.

The *helmet*, or covering for the head; the *gorgerin* or *gorget*, the collar piece which covers the junction between the helmet and the cuirass; the *cuirass*, covering the body from the waist upwards; the *epaulières*, guards for the shoulders; the *brassarts*, the pieces worn on the arms, from the shoulder to the elbow; the *coudières*, the portions covering the inside of the elbow-joints; the *avant-bras*, guards for the lower arms; the *gauntlets*, or gloves, covered on the outside with steel plates; the *faudes* or *taces*, the articulated pieces which cover the hips; the *guard-faudes* or *tuilles*, plates which cover the front of the thighs; the *cuissarts*, or thigh-pieces; the *genouillères*, or knee-guards; the *grevières*, or leg-pieces; the *sollerets* or *soulières*, the laminated coverings for the feet to which the knightly spurs are attached; the *haubergeon*, the defence for the body worn under the cuirass, etc.

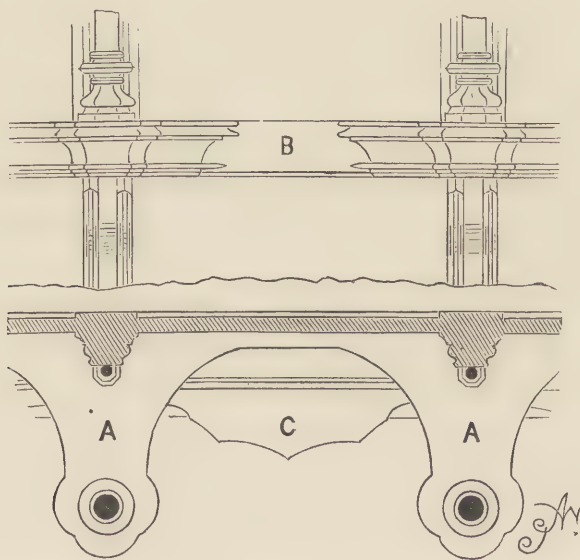
**ARMOURY.** A building or apartments constructed for the storage of weapons and implements of war, properly arranged for their preservation



and easy removal in times of necessity. The term is also employed to designate a gallery or museum devoted to the display of arms and armour.

The most important armouries in existence are those of Dresden, constructed in 1695 to accommodate one hundred thousand stand of arms, and also heavy artillery;\* the Royal Armoury, at Madrid, erected by Gaspar de la Vega, in 1565, for Philip II., consisting of a gallery two hundred and twenty-seven feet long by thirty-six feet wide; and the Museum of Artillery, at Paris. Armouries of less importance exist in the Tower of London; the Imperial Arsenal, at Vienna; the Arsenal of Zurich, the Museum of Sigmaringen, and several other places.

**ARM-REST.** That portion of a choir-stall which is designed to support the arms of the occupant while he is either in a leaning or stand-



1

ing position. The term is also applied to the moulded or carved elbows of stalls and bench ends, so frequently met with in late mediæval woodwork.

\* "At Dresden the armoury has no external importance, but its arrangements may serve as a basis for study; the rooms are separately devoted to implements of mimic war and the chase, tournament or parade armour, arms for service, firearms, trappings (which occupy two saloons), oriental weapons, and occidental curiosities. Besides these saloons there ought to be, in any complete edifice designed for such a purpose, entrance halls; waiting rooms for servants; vestibules and corridors; the private offices of the governor, his secretary, and clerks, with waiting rooms to each; two reception saloons; a library; archives; clerks' rooms and waiting rooms devoted to the business of the establishment; cleaning rooms and a court-yard of sufficient size to admit of the exhibition, perhaps under shelter, of specimens too large or too heavy to be admitted into the building."—*Dict. of Arch.* Arch. Pub. Soc., Lond.

The necessity for some rest for the arms during the long services of the Church was recognised in comparatively early mediæval times. The ecclesiastics seldom assumed on these tedious occasions an ordinary



2

standing position, but a more easy leaning one, resting lightly on the sloping ledge of the miserere, with their elbows or arms on the arm-



3

rests.\* The arm-rests, almost invariably, are curved on plan, and richly

\* "The words for the seat preserve at once the traditionary rule and the indulgence—stall from the Latin *stare*, to stand; and *misericord*, mercy; the latter forming a compromise to rest the canons without their deviating from a standing position."—*Sacred Archæology*, Rev. M. E. C. Walcott, p. 549.

moulded on their edges so as to form ornamental cappings to the stall divisions. These mouldings sometimes die away towards the backs of the stalls, which are left plain so as not to inconvenience the persons leaning against them, as in the choir stalls of Manchester cathedral ; in



the choir stalls of Chester cathedral the mouldings are continuous, no plain parts being left at the backs. The usual form of such arm-rests is given, in plan and elevation, in Fig. 1, from Manchester cathedral stalls. C is the ledge of the miserere, in its turned-up position ; B is the plain part of the back upon which the mouldings of the arm-rests, A, terminate. In



this instance the upper surface of the rest is level; but sometimes it is inclined downwards towards the back, so as to be more in accordance with the leaning position of the body, as in the beautiful stalls of the chapel of Notre-Dame de la Roche (thirteenth century). For further particulars and illustrations see article *Stall*.

Ornamental arm-rests, or stall elbows, are met with in great profusion, and are frequently carved in the most elaborate manner. They are commonly found under the greater arm-rests, above described, on the curved elbows of the stall divisions, a short distance above the subsellæ. These were for resting the hand upon while the occupant was seated. Fig. 2 is an example from the choir-stalls of Winchester cathedral (Early Decorated), and Fig. 3 from those of the church of St. Margaret, Lynn, Norfolk (Late Decorated). More elaborate examples are to be found in the choir-stalls of Manchester cathedral. Human heads, terminating projecting moulded arm-rests, are to be found in the Perpendicular stalls of the church of St. Margaret, Leicester. Grotesquely carved heads, animals, and other devices are introduced in the stalls of Chester cathedral; and some magnificent groups form the arm-rests of the great bench ends. In the Perpendicular stalls of St. Nicholas' chapel, Lynn, Norfolk, beautifully carved animals form the arm-rests, of which Fig. 4 is a good example.

**ARRANGEMENT.** In architectural nomenclature, the term employed to express the disposition or the placing together of parts in a manner conformable to the uses and artistic conception of the structure.

Vitruvius says:—"Architecture depends on fitness (*ordinatio*) and *arrangement* (*dispositio*), the former being called *τάξις*, in Greek, and the latter *διάθεσις*; it also depends on proportion, uniformity, consistency, and economy, which the Greeks call *οικονομία*. Fitness is the adjustment of size of the several parts to their several uses, and requires due regard to the general proportions of the fabric: it arises out of dimension (*quantitas*), which the Greeks call *ποσότης*. Dimension regulates the general scale of the work, so that the parts may all tell and be effective. *Arrangement* is the disposition, in their just and proper places, of all the parts of the building, and the pleasing effect of the same; keeping in view its appropriate character. It is divisible into three heads, which, considered together, constitute design: these, by the Greeks, are named *ἰδέαι*: they are called *ichnography*, *orthography*, and *scenography*. The first is the representation on a plane of the ground-plan of the work, drawn by rule and compasses. The second is the elevation of the front, slightly shadowed, and showing the forms of the intended building. The last exhibits the front and a receding side properly shadowed, the lines being drawn to their proper vanishing points. These three are the result of thought and invention. Thought is an effort of the mind, ever incited by the pleasure attendant on success in compassing an object. Invention is

the effect of this effort; which throws a new light on things the most recondite, and produces them to answer the intended purpose. These are the ends of *arrangement*.”\*

In painting and sculpture, arrangement is one of the essentials in every composition. On this subject Fairholt aptly remarks:—“ARRANGEMENT is the placing together of *parts* in a manner conformable to the character and aim of the work; it relates entirely to the form in which the subject must be worked out so as to produce an intuitive perception of its individuality. Artistic *arrangement* belongs not only to the object as a whole, but to each part specially, to groups as well as to single figures, and to the position and contrast of their limbs. In painting it refers to the distribution of colours, and the disposition of light and shade, all of which require a peculiar artistic arrangement; light, shade, and colouring being the soul of all painting. The characteristic of *arrangement* must be unity in manifoldness; but there is here a threefold relation, either cause to effect, argument to conclusion, means to an end; or as part to part, or to the whole. The laws of *arrangement* are therefore the laws of causality, referring to the purpose and proportion; every beautiful work of Art must contain a prevailing thought, a principal idea, to which all else is subject. In this subordination the law of causality is acknowledged; and thus, to ARRANGE means, in Art, to *plan*, so that one part appears to follow from another.”

ARRAS. A textile fabric used for the hangings of rooms in the fourteenth and fifteenth centuries. Its manufacture appears to have reached the greatest perfection in the fourteenth century in the town of Arras, in French Flanders; and from that period the term arras was applied to all the finer varieties of tapestry, notwithstanding their being fabricated in other towns. The true arras tapestry was a thick and heavy material, eminently adapted for hangings and curtains to check draughts of air from doors and windows; it was woven in numerous patterns in rich colours, and when hung, produced a very warm and comfortable effect in an apartment.

“Arras is but one among other terms by which, during the middle ages, tapestry was called. Its earliest name was Saracenic work; ‘opus Saracenicum;’ and, at first, tapestry was wrought as in the east, in a low or horizontal loom. The artizans of France and Flanders were the first to introduce the upright or vertical frame, afterwards known abroad as ‘de haute lisse,’ in contradistinction to the low or horizontal frame called ‘de basse lisse.’ Workmen who kept to the unimproved loom were known, in the trade, as Saracens, for retaining the method of their paynim teachers; and their work, Saracenic. In the year 1339 John de Croisettes, a Saracen-tapestry worker living at Arras, sells to the Duke of Touraine a piece of gold Saracenic tapestry figured with

\* Gwilt’s translation, book i., cap, 2.



the story of Charlemagne: 'Jean de Croisettes, tapissier Sarrazinois demeurant à Arras, vend au duc de Touraine un tapis sarrazinois à or de l'histoire de Charlemaigne.' The high frame, however, soon superseded the low one; and among the pieces of tapestry belonging to Philippe duke of Bourgogne and Brabant many are especially entered as of the high frame; one of which is thus described: 'ung grant tapiz de haulte lice, sauz or, de l'istiore du duc Guillaume de Normandie comment il conquist Engleterre.'" <sup>1</sup>

The weaving of tapestry was by no means confined to the town of Arras; for the industry was successfully followed in several towns in France and Flanders, where trade-guilds were established to encourage and protect its manufacture. But for design and skilful workmanship the *ateliers* of Arras appear to have been the most celebrated. Amongst the few historical records preserved to us, relative to the trade of Arras, we find that in 1367 tapestries of Arras were purchased in the name of the town to be presented to Charles V., King of France, on the occasion of the marriage of Philip the Bold. In 1382 Philip the Bold ordered a manufacturer, named Michel Bernard, to make him a piece of tapestry depicting the battle of Rosebecke; and three years after this, he ordered a hanging, representing the legendary history of St. Anne, and a piece of tapestry, depicting the Seven Ages; these were made by one Jean Cosser, and cost two thousand one hundred gold crowns. Philip the Good purchased in 1440 a piece of tapestry, made by Jehan de Vallois, of Arras, on which was wrought the Passion of our Lord. Several manufacturers' names are mentioned in the accounts of the House of Burgundy, extending through the whole of the fifteenth century. And it is probable but for these and some other brief scraps of information we should have not known the names of any of the leading artists of Arras; for on none of the pieces of tapestry still preserved do we find any name or mark of identification.

We meet, in old English documents, with a term not unlike the one under consideration; this term is ARESTE. Dr. Rock, speaking of this word, says:—"Cloth of Areste is another of those terms for woven stuffs which students of textiles had never heard of were it not to be found in our old English deeds and inventories. The first time we meet it is in an order given, A.D. 1244, by Henry III., for finding two of these cloths of Areste with which two copes had to be made for royal chapels: 'Duos pannos del Areste ad duas capas faciendas,' etc."<sup>2</sup> Again it comes a few years later at St. Paul's, which cathedral, A.D. 1295, had, besides a dalmatic and tunicle of this silk—"de serico albo diasperato de Arest"<sup>3</sup>—as many as thirty and more hangings of this same texture.<sup>4</sup>

From the description of these pieces we gather that this so-called cloth of Areste must have been as beautiful as it was rich, being for the most part cloth of gold, figured elaborately, some with lions and double-headed

<sup>1</sup> *Textile Fabrics*, by the Very Rev. Daniel Rock, D.D., Lond., 1876.

<sup>2</sup> *Excerpta Historica*, p. 404.

<sup>3</sup> *St. Paul's Cathedral*, ed. Dugdale, p. 322.

<sup>4</sup> *Ibid*, p. 329.



eagles, others, for example, with the death and burial of our Lord—'campus aureus cum leonibus et aquiis bicapitibus de aurifilo contextis—campus rubeus cum historia Passionis Domini et sepulturæ ejusdem.'"

It has been supposed that this cloth of Areste was in some way connected with the manufactures of the town of Arras; this supposition, however, Dr. Rock conclusively refutes. He says:—"That this sort of stuff, wove of silk and gold, was of any kind of Arras, or made in that town, to our seeming is a very unhappy guess. Arras had not won for itself a reputation for its tapestry before the fourteenth century. Tapestry itself is too thick and heavy for use in vestments; yet this cloth of Areste was light enough for tunicles, and when worn out was sometimes condemned at St. Paul's to be put aside for lining other ritual garments—'ad armaturam faciendam.'<sup>1</sup> The term 'Areste' has little or nothing in it common to the word 'Arras,' as written either in French, or under its Latin appellation 'atrebatum.' Among the three meanings for the mediæval 'Aresta,' one is, any kind of covering. To us, then, it seems as if these cloths of Areste took their name not from the place whereat they had been wove, but from the use to which, if not always, for the most part, we put them—that of hangings about our churches, since in the St. Paul's inventory they are usually spoken of as such—'culcitæ pendules, panni penduli.'<sup>2</sup> Moreover, tapestry, or Arras work, being thick and heavy, could never have been employed for such light use as that of apparels, nor would it have been diapered like silk, yet we find it to have been so fashioned and so used—'maniculariis apparatis quodam panno rubeo diasperato de Laret,' &c."<sup>3</sup>

**ARRICCIATO.** (*Ital.*) In the preparation of walls for fresco painting, the **ARRICCIATO** is the coat of plaster laid on to receive the final *intonaco*, or material on which the painting is executed.

Leon Batista Alberti, the celebrated architect, in his work *De Re Ædificatoria* (Lib. vi., cap. 9), gives several particulars relative to the preparation of walls for fresco. His remarks may be epitomised as follows. In the plastering of walls three varieties of *intonachi* are employed; the first, or rough coat, prepared so as to adhere strongly to the wall and support the after-coats, is called *rinzaffato*; the second coat is termed *arricciato*; this is to be prepared with lime and clean river sand, and laid on with a rough surface, so that the final *intonaco* may adhere firmly. Alberti is particular in his directions as to the preparation of the lime for the *arricciato* and *intonaco*; it is to be slaked in a covered trough with clean water, added by degrees until it is greatly in excess above the lime; all is then to be well worked with a spade until perfectly free from lumps. When this operation is complete, the fluid mass is covered up and left to mature for at least three months.

According to Andrea Pozzo, a Jesuit writer on art who lived in the end of the seventeenth century, the *arricciato* was the *first* coat of mortar

<sup>1</sup> *St. Paul's Cathedral*, ed. Dugdale, p. 329.    <sup>2</sup> *Ibid.*, p. 329.    <sup>3</sup> *Ibid.*, p. 335.

applied to the wall, but it is probable that he alludes to the first coat specially connected with the processes of fresco painting, a coat of rough-cast having been laid on during the construction of the building. This supposition is rendered probable by the words of Alberti, who remarks :—“ I approve very much of those who, instead of nails, insert between the stones certain pieces of stone, or flints, so as to project ; but, for this purpose, a wooden mallet must be used, and the fresher and rougher the wall is, the better it will hold the *rinzaffato*, the *arricciato*, and the *intonaco* ; therefore if, while building and while the work is being done, you apply the *rinzaffato*, although thinly, you will cause the *arricciato* and the *intonaco* to adhere to it very strongly.”\*

It appears that it was a custom with the artists of the fifteenth century to enlarge their original small designs on the *arricciato*, executing the drawing with a pencil dipped in red colour (*rosaccio*) ; by this means they were enabled to judge correctly of the fitness of the treatment and arrangement of their subjects for the spaces they were to occupy. When altered and amended, the red lines were traced on paper, which probably formed the full-sized cartoons. The *intonaco* was then spread over the *arricciato* and the painting proceeded with. The fact of drawings having been made on the *arricciato* has been proved by the examination of it where portions of the *intonaco* have fallen off. (See *Fresco*.)

**ARRIÈRE-VOUSSURE.** (*Fr.*) The term used by P. Delorme, and the French architects since his time, to designate the vault or arch placed on the inside of a window or door-way, and differing in form from that of the outer arch of the window or door, either for the purpose of admitting more light, or to enable the door to open without coming in contact with it.

The term was in all probability the original middle-age one for this feature, which is so frequently met with in Gothic architecture, and as we have no old equivalent in our language, there is no reason why it should not, like the word *voussoir*, be incorporated in our architectural nomenclature. The literal translation of the term gives us *rear-vault*, which, of course, can be adopted by the English architect if preferred. Professor Willis suggests its adoption in the following passage :—“ As the contrivance is so universal in mediæval architecture, we can hardly doubt but that this name” (*arrière-voussure*) “ is also the original one, for Delorme uses it without explanation, as if it were already well established and understood. We may therefore call the said vault, rib, and shaft, the rear-vault, rear-rib, and rear-shaft of the window or door.”

The French architects distinguish three modes of constructing or three forms of the *arrière-voussure* by different names. First, that which surmounts a semicircular opening, and is in itself a segmental vault, is called *arrière-voussure de Marseille*. Second, that which springs forward and

\* Mrs. Merrifield's translation.

upward from a semicircular opening and terminates in a horizontal line at the face of the wall, is termed *arrière-voussure de Montpellier*. Third, that which curves forward and upward from a square-headed opening and terminates at the wall surface in a semicircular or elliptical arch, is designated *arrière-voussure de Saint-Antoine*.\*

In mediæval architecture, the *arrière-voussure* is treated in a great number of ways, and in English examples it frequently assumes a highly ornamental character, or, at least, the portion which is adjacent to the wall surface which is often accentuated and moulded, and sometimes cusped, as in a window of the bishop's palace at Wells, and at Piddington, and Bampton, Oxfordshire. (See *Rear-arch* and *Rear-vault*.)

**ARRIS.** The line on which two surfaces of any solid body forming an exterior angle meet together; an arris, accordingly, does not admit of measurement, and in this respect differs from an edge, which, in its true sense, signifies the narrow surface of any body, such as a slab of stone or a plank, which admits of measurement. In common phraseology, however, the words arris and edge are frequently used as synonymous; and what is strictly an arris is often described as a "sharp edge." But that there is a difference in the signification of the two words, recognised by workmen, is proved by the very general expression, "bringing or working an edge up to an arris."

Professor Willis remarks — "*Arris*, for the edge of a stone, is derived from *Arête*, which is used by Delorme (in the old form *Aireste* and *Areste*), and the French masons, precisely as *Arris* is by ours." †

**ARROWS.** In Christian art, arrows are frequently introduced, usually as attributes emblematic of martyrdom. The following saints are represented bearing arrows: St. Edmund, king and martyr, carrying arrows in one hand, or with arrows piercing him; St. Augustine, bishop, confessor, and doctor, with a heart transfixed with an arrow, in allusion to the poignancy of his repentance; St. Sebastian, martyr, carrying several in his hand, with arrows piercing his body, or offering arrows, as instruments of

\* "Les deux premières *arrière-voussures* sont indispensables; car autrement on ne pourroit pas ouvrir entièrement une porte ou une croisée ceintrée par le haut, et la faire joindre contre les piédroits. C'est pourquoi les *arrière-voussures* de Marseille et de Montpellier doivent se terminer, contre les embrasemens des piédroits, par une courbe semblable à celle de la feuillure, qui reçoit la porte lorsqu'elle est fermée, afin qu'elle puisse se joindre tout-à-fait contre les embrasemens des piédroits dans toute sa hauteur.

"Quant à l'*arrière-voussure* de Saint-Antoine, elle n'est nécessitée que lorsque derrière une porte carrée, on est obligé de raccorder les embrasemens avec un ceintre circulaire ou elliptique. Cet arrangement, qui a un certain mérite par rapport à l'appareil quand il est bien exécuté, ne produit jamais un bon effet relativement à la décoration."—Quatremère de Quincy.

† "ARESTA and ARISTA. a Gall. *Arête*. Angulus ædificii exterior.' (Du Cange). Vide also Matt. Paris. (Wats. 1054)." *Architectural Nomenclature of the Middle Ages*, by Willis.

"ARÊTE, s. f.—Angle saillant formé par la rencontre de deux faces d'un corps solide; *angle vif* d'une pierre, d'une pièce de bois, d'une barre de fer."—*Dict. Rais. d'Arch*—E. Bosc.



his martyrdom, to heaven ; St. Ursula, virgin and martyr, carrying one or more in her hand, or wounded by an arrow ; St. Anastasius, martyr, pierced with arrows whilst on a gibbet ; St. Otho, bishop and confessor, with several arrows in his hand ; and St. Christina, virgin and martyr, pierced with arrows, or carrying them in her hand.

**ARSENAL.** A large public establishment in which arms and all descriptions of implements of war are stored for use ; and where certain branches of manufacture in connexion with artillery, projectiles, and ammunition are carried on. In short, an arsenal may contain workshops and storehouses for every requirement connected with a fleet or an army in active service.

The ancient Romans had arsenals (*armamentaria*) on every frontier of their widely-spread empire, from which their armies could be readily equipped and furnished with stores. The most celebrated arsenal of the middle ages was that of Venice, constructed, as it is stated, from the designs of Andrea da Pisa, under the direction of the Venetian architect, Filippo Calendario, who was hanged as a conspirator in 1354. The chief portions of Andrea's design were the battlemented towers. The great entrance archway is of later date (1460-1581). This arsenal was designed with considerable architectural character ; its ropewalk, with its colonnade of ninety-two Doric columns, and its workshops, arcaded throughout, distinguish it from all similar establishments.

It is unnecessary, in a work like the present, almost exclusively devoted to art matters, to go further into the consideration of the present subject, or to describe the purely utilitarian arsenals of modern times.

**ART.** " Art is a representation, that is an activity by means of which something internal or spiritual is revealed to sense. Its only object is to represent, and it is distinguished by its being satisfied therewith from all practical activities which are directed to some particular purpose of external life." Such is Müller's admirable definition ; one which it would be difficult to surpass or even equal in clearness and comprehensiveness.

Art is the outcome and the evidence of man's higher being, the creation of his mind, and the language of his soul in form.\*

The exercise of art is accompanied with the most intense enjoyment ; it is the revealing of the treasures of the imagination to the sense of sight or hearing, for Music and Poetry, as well as Architecture, Painting, and

\* " Deep feeling is the only true source of lofty art. It is *feeling* which reveals to us true ideas and correct intentions, and gives that indefinable charm, never to be conveyed in words, but which the hand of the painter, guided by the poet's soul, alone can diffuse throughout all his works. From religious feeling, love, and devotion, arose the silent inborn inspiration of the old masters : few, indeed, now seek their hallowed inspiration, or tread the paths by which alone they could attain it, or emulate that earnest endeavour to work out the principle of serious and noble philosophy, which is discoverable in the works of Durer and Leonardo Da Vinci."—Schlegel's *Æsthetic Works*. Lond., 1849.

Sculpture, are arts in the highest signification of the term ; and alike demand the employment of the higher mental powers in their proper practice.

Whilst nature is the ever open book from which man derives his forms and inspirations, his art does not consist in simply reproducing or copying those forms ; to imitate is not to create, and without creation art, in its highest sense, cannot exist. Müller says :— “ The more immediate determination in art depends especially on the kind of connexion between the internal and the external, the representing and the represented. This connexion must absolutely be one imparted of necessity in the nature of man, not assumed from arbitrary regulation. It is not a subject of acquisition, although it may exercise greater or less influence on different natures and different stages of civilization. The spiritual significance of a series of tones, the character and expression of a countenance, are not learned, although more strongly and delicately felt by one than another. Nature herself has established this sympathy of the mind with sensible forms, and on it all art depends. At the same time this correspondence in art is so close and intimate that the internal or spiritual momentum immediately impels to the external representation, and is only completely developed in the mind by the representation. Hence the artistic activity is from the very beginning in the soul directed to the external manifestation, and art is universally regarded as a *making*, a *creating* (art. τέχνη). The external or representing in art is a sensible form. Now the sensible form which is capable of expressing an internal life can be created by the fancy, or present itself to the external senses in the world of reality. But as even ordinary vision, and much more every artistic exercise of sight, is at the same time an activity of the fancy, the form-creating fancy in general must be designated as the chief faculty of representation in art.” \*

FINE ARTS. In deciding which of the arts shall be included in the list of those designated *fine* or *liberal*, we must test each by the conditions above given. In doing so, we find that Architecture, Painting, Sculpture, Music, and Poetry are alone those which fully satisfy them all. In each and all of these the highest faculties of the human mind find boundless scope for exercise ; in them the field of fancy and creation is absolutely limitless.

DECORATIVE ART. While a fine art is understood to be practised without any reference to utility, and with the sole view of appealing to the higher senses and intellect of man, decorative art is understood to be something added to that which is formed for utility, for the purpose of rendering it more agreeable to the sense of sight. The line of demarcation between fine and decorative art has, however, never been satisfactorily fixed. A Majolica dish painted with the fanciful arabesques of the Raphael school, and a similar dish painted with a finely-treated mythological subject by the hand of the great master himself, would be widely different things

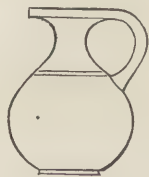
\* *Ancient Art and its Remains*, by C. O. Müller. Lond., 1852.

from an art point of view. With reference to the former, we should unhesitatingly pronounce its ornamentation decorative art; the latter we should quite as decidedly place amongst works of fine art. Yet both dishes might be the same, and destined for the same use; and the painting in either instance would simply decorate an article of utility.

**ARTIST.** One who professes and practises a fine art worthily. The term is correctly applied to a properly qualified and skilful architect, painter, or sculptor, but at the present time it is frequently and justly applied to distinguished professors of the other fine arts, music and poetry. The term is a title of honour, and should in all cases be used with due consideration and caution, for it by no means follows that an individual who chooses to profess a fine art is an artist in the proper signification of the term. A true artist is one who evinces in all his works comprehensive knowledge, skilful manipulation, and the exercise of the higher faculties of the mind; he must possess a powerful imagination, a poetic temperament, and an intuitive perception of the beauty and fitness of things.

**ARULA.** The late Latin term for a small altar, or for the mensa or upper horizontal slab of an altar.

**ARYBALLOS.** The name given by the ancients to a globular, purse-shaped vase or bottle for holding perfumed oils and ointments. It was made of different materials and dimensions, according to the use to which it was destined; it was generally furnished with a loop handle, by which it could be suspended or carried in the hand, as in the accompanying illustration. Sometimes it was made without a base.



**ARZICA.** The name given during the middle ages to a pigment of a yellow colour; it appears to have been either a lake or an ochre.

According to the valuable book of recipes, a manuscript of the fifteenth century, preserved in the convent of St. Salvatore, at Bologna, and generally spoken of as "the Bolognese Manuscript" in treatises on art; the pigment is a yellow lake. The recipe for its preparation, in the MS., is as follows:—

"*To make good and fine Arzica.*—Take one pound of weld, which the dyers use, cut it very fine, then put it into a glazed or tinned vase, and add to it enough water to cover the herb. Make it boil until the water is half wasted, and if there is not enough water add a sufficient quantity and no more; then take 2 oz. of travertine finely ground, or 2 oz. of white lead, and  $\frac{1}{2}$  oz. of roche alum ground very fine, then put all these things together a little at a time to boil in the vase directly, before the water cools, and stir the water continually, remove the vessel from the fire, and, when nearly dry, pour off the water. Then take a new brick hollow in the middle,



lay the arzica on it, and let it settle perfectly; then put it on a small and well-polished board to dry, and it is done.”<sup>1</sup>

Cennino Cennini, in his interesting treatise on painting, speaks of arzica as an artificial colour much used by the Florentines in miniature painting,<sup>2</sup> and in all probability he alluded to the lake prepared from the *reseda luteola* or *gualda*, as it is called in the Bolognese manuscript, a plant celebrated, for its dying properties, throughout Europe from very early times.

The other description of arzica appears to have been—a pigment of an ochreous nature, prepared from a yellow loam or earth used in forming moulds in brass casting. In the Table of Synonymes, in the manuscripts of Jehan le Begue,<sup>3</sup> it is so described.

**ARZICON OR ARSICON.** A name given in the middle ages to a bright yellow pigment. It is generally understood to be a contraction or corruption of the Greek word ἀρσένικον, which, according to Vitruvius (lib. vii., cap. 7), signifies orpiment, or sulphuret of arsenic. (See *Orpiment*.)

**ASAROTUM, OPUS.** (*Lat.*) The term given by the ancients to a mosaic floor of a dining-room, which represented a pavement on which the crumbs and other remnants of a feast had fallen, and remained unswept.

We are told by Pliny that, in the royal palace of Pergamum, there was a dining-hall with a mosaic floor, executed by a celebrated artist called Sosus. This represented, in a very deceptive manner, a floor with numerous fragments of a dinner strewed over it; the hall acquired from this remarkable mosaic the name of “the unswept” (οἶκος ἀσάρωτος); and afterwards all floors made in imitation of this one were distinguished by the term, in allusion to their apparently unswept condition.

**ASCELLA.** According to Du Cange, the late Latin diminutive for *ALA*, as the wing of a building. (See *Assella*.)

**ASCENDANTS.** An old term, now rarely used, for the vertical portions of the ornamental frame or dressing of a door, window, chimney, or other opening. The horizontal portion, resting on the ascendants, being designated the traverse.

**ASCENSORIUM.** The late Latin term (derived from *ascendo*, to ascend), signifying a staircase or ladder.

**ASCETERIUM.** The late Latin designation for an apartment or an

<sup>1</sup> Mrs. Merrifield's translation. *Original Treatises on the Arts of Painting*, vol. ii., p. 482. Lond., 1849.

<sup>2</sup> *A Treatise on Painting*, by Cennino Cennini, translated by Mrs. Merrifield. Lond., 1844.

<sup>3</sup> *Original Treatises on the Arts of Painting*, vol. i., p. 19.

enclosed space in which athletæ met to perform their exercises. According to Du Cange, the word was applied to a retreat for ascetics, and frequently also to an ordinary monastery. The term has sometimes been corrupted to ARCHISTERIUM.

**ASCOS.** An antique vessel of the form shown in the accompanying illustration, used for holding oils and perfumes, for the bath or toilet. It derived its name from its resemblance to a full wine-skin or leathern bottle. Vessels of this shape are still common in Spain and Portugal, and indeed throughout the south of Europe, where they are used for water.



**ASHLAR.** The general term used to designate all descriptions of squared and hewn stone employed for the facing of walls. The word is found in old documents in the following forms:—ACHELER, ACHELOR, ACHILLAR, ACHLER, ASCHELERE, ASCHILER, ASHELAR, ASHELER, ASHLER, ASLER, ASLURE, ASSHELER, ASSHLER, ASTLER, ESTLER.

The word is used, however qualified by other terms, to denote that the stones are hewn and properly squared to dimensions to admit of their being set in regular courses, having their faces brought to a uniform appearance; they are thus distinguished from the rough stones as they come from the quarry, and from the irregularly-shaped and rudely-dressed stones used in rubble-work. (See *Masonry*.)

**ASP.** In Egyptian art, the emblem of the god Chnoumis or Chnum, one of the triad of Elephantine and the Cataracts, and the symbol of royalty.\* The asp appears to have been worshipped on account of a certain resemblance between its habits and certain operations of the divine power in nature (see *Serpent*), and great honours were paid to it by the ancient Egyptians. Sir J. Gardner Wilkinson remarks:—"This serpent was called Thermuthis, and with it the statues of Isis were crowned as with a diadem. 'Asp-formed crowns' are frequently represented on the heads of goddesses and queens in the Egyptian sculptures. The statues of the mother and wife of Amenophis (the vocal Memnon) in the plain of Thebes have a crown of this kind; and the Rosetta Stone mentions 'asp-formed crowns,' though this last might refer to the single asp attached to the front of the cap usually worn by the king. Instances sometimes occur of a fillet of asps bound round the royal crown, and I have once seen the same encircling the head-dress of Osiris. Ælian† mentions a custom of 'the Egyptian kings to wear asps of different colours in their crowns, this reptile being emblematic of the invincible power of

\* For further particulars see *The Manners and Customs of the Ancient Egyptians*, Wilkinson. New ed., Lond., 1878; vol. iii., p. 5.

† Ælian, *Nat. An.*, vi., 33.

royalty.' . . . The Egyptian asp is a species of cobra da capello, and is still very common in Egypt, where it is called *Náshir*, a word signifying 'spreading,' from its dilating its breast when angry."

The accompanying illustrations, Fig. 1, the goddess Uati, lady of heaven, and genius of the Lower Country, and Fig. 2, the goddess Nishem, of Eileithyia, regent of heaven, show asps, winged, and wearing the crowns of



Upper and Lower Egypt. When represented as the emblem of Chnoumis and on head-dresses as the symbol of royal power, the asp is neither winged nor crowned. Sometimes the asp was delineated with a human head.

**ASPASTICUM OR ASPATICUM.** A room attached to the early basilicæ or churches, in which the ordinary business matters connected with the establishment were conducted, and where the bishops and presbyters conversed with visitors. In the generality of instances the *diaconicum majus* was used as an aspasticum, and it was sometimes designated the **SALUTATORIUM** or **RECEPTORIUM**, because bishops received and conversed with guests and visitors there. The apartment, in addition to the above, was also called the **ASPASTORION** or **METATORIUM**.

**ASPECT.** The term employed in speaking of a building with reference to its direction towards any point of the compass. In applying the term to a public building, the façade is always understood to be alluded to; thus a museum with a southern aspect denotes that its most important side, that which is most highly decorated, and which probably contains the chief entrance, faces towards the south. In applying the term to a dwelling-house, the position of the windows of the principal apartments are commonly alluded to.\*

Elmes says: "ASPECT is also understood in ancient architecture for the manner of distributing the parts of the sacred buildings or temples, and are divided by Vitruvius into seven orders: first, the Antis; second,

\* For remarks on the practical questions of aspect, the student may consult *The English Gentleman's House*, by Professor Kerr, Lond.; *Encyclopædia of Cottage, Farm, and Villa Architecture*, by Loudon; *Dict. of Arch.*, Arch. Pub. Soc., Lond.; or *Cottage, Lodge, and Villa Architecture*, by W. & G. Audsley.



the Prostyle; third, the Amphiprostyle; fourth, the Peripteral; fifth, the Dipteral; sixth, the Pseudodipteral; and seventh, the Hypæthral.”\*

**ASPECTANT.** A term in heraldry, used when two animals are placed face to face in a charge, looking towards, but not in the act of attacking, each other. When represented in the latter condition, they are described as *combatant*.

**ASPERGILLUM.** A water sprinkler, usually formed of hair or some fibrous material attached to the end of a short rod or handle.

The aspergillum was used by the ancients for sprinkling the lustral water. The temple of Vesta, at Rome, was sprinkled daily with water from the fountain of Egeria, and this was done by an aspergillum formed of a horse's tail, with a handle in the shape of a horse's leg, or of some spiral or other ornamental design.

The aspergillum is used in the Latin Church for sprinkling holy water. It is usually in the form of a brush of long hairs, widely spread, and mounted on a straight handle. In the early church it was simply a bunch of twigs, probably hyssop where that plant could be obtained. In the Gregorian Sacramentary, the bishop, in the consecration of a church, sprinkles the altar seven times with hyssop dipped in holy water. “The modern French name *Goupil* indicates that a fox's brush was some time used as an aspergillum.”†

In Christian art, the aspergillum is the attribute carried by St. Benedict, abbot and confessor; St. Conrad, bishop and confessor; St. Martha, who carries it in the act of sprinkling a dragon; and St. Exuperius, bishop and confessor.

**ASPERSORIUM OR AQUAMINARIUM.** The late Latin names for a stoup or holy water vessel.

**ASPHALTUM.** Compact bitumen, a natural material of a dark brown colour, approaching black, solid, brittle, and breaking with a conchoidal fracture. It is found in various parts of the globe, though chiefly in Palestine, Albania, France, South America, Trinidad, and Italy. That found in Palestine, on the shores of the Dead Sea (*Lacus Asphaltites*), has been commonly designated “Jews' pitch.”

Asphaltum has, from very early times, been used in the arts; it was employed as a species of cement in the construction of buildings; the walls of Babylon, for instance, were built of bricks set in hot or melted bitumen. The ancient Egyptians used it in embalming their dead; and the remains of the substance obtained from Egyptian tombs are now used in preparing the pigment designated “mummy.” (See *Mummy*.)

A preparation of asphaltum was employed by the old masters, chiefly for glazing their paintings, but the exact materials used to dissolve it have

\* *Dict. of the Fine Arts*, Lond., 1826.

† Rev. S. Cheetham, M.A., in *Dict. of Christ. Antiq.*

not been clearly settled.\* Both the preparation and use of asphaltum, as a pigment, require the greatest care and skill; unless it is extremely pure it cannot in any way be depended on. It is, however, an extremely convenient material, in the artist's hands, for backgrounds, drapery, flesh in shadow, and for warming and glazing other pigments. If it were only permanent in colour and less treacherous in its nature, there would be few pigments more valuable on the painter's palette.

**ASS.** In Christian art, the emblem of sobriety and meekness. Representations of the ass, with a direct symbolical significance, are not common; it is probable, however, that it is thus introduced in the subject of St. Hilarion driving away the devil, in the Campo Santo, at Pisa. The abbot is here mounted on an ass. The ancient law, or the synagogue, was sometimes symbolised by a female seated upon an ass, as in the sculptures of the cathedral of Worms (thirteenth century). The Church, in contrast, is here represented in the form of a crowned female, carrying a chalice and cross, seated on an animal with the heads of the four evangelistic symbols, and its feet in the form of those of a man, ox, lion, and eagle. (See *Church and Synagogue*.)

**ASSEMBLAGE OF THE ORDERS.** In architectural phraseology, the expression used to denote the employment of two or more of the orders in a single design; it is also understood to signify that the orders

\* In Mrs. Merrifield's *Original Treatises on Arts of Painting*, we find the following passages:—"That the picture was invariably first painted in cold colours, and that the warm colours were afterwards glazed upon them. That the whole surface of the picture, when the painting was completed, was glazed over with asphaltum ('spalto bianco, bitume Hebraico'). 'But,' I remarked, 'if asphaltum is now used, it is almost sure to crack.' He answered, 'That is because you do not know how to use it.' He added, that all Titian's pictures were glazed with it." (p. cxx). "He told me that Titian began by painting in the flesh in chiaroscuro with a mixed tint, formed of biadetto, biacca, and a very little terra rossa. He then painted the lights with flesh colour, and laid by the picture to dry. After 5 or 6 months he glazed the flesh with terra rossa and let it dry. He then painted in the shades transparently (that is, without any white in the shadows), using a great deal of asphaltum with them. (p. cxxiii.)—Signor A., of Milan. . . .

"For a green drapery, Titian began with terraverde, with, perhaps, giallolino for the lights. When dry he glazed the whole with verdigris, and the shades with asphaltum; both these colours might be rubbed in with the hand. Sometimes he glazed with asphaltum without the verdigris, when he required a warm rich green. That asphaltum could be easily dissolved for use in spirit of turpentine. (p. cxxx.)—Signor C., of Venice. . . .

"The flesh" (in a painting by Gian Bellino) "was finished with glazings of asphaltum. The whole figure, drapery, &c., finished with glazings of asphaltum and terra di Cologne, not much burnt. Asphaltum was mixed with olio di sasso (naphtha), or spirit of turpentine. (p. cxxxiv.)—Signor D., of Venice. . . .

"He also told me the pictures of Cima da Conegliano were painted with solid colours in a light key, and that the shades were laid on transparently with asphaltum. Tintoretto used it extensively, and some few used *mommia*, but it was not generally approved of. (p. cxli.) . . . Signor C. observed that another cause of the darkening of pictures has been the excessive use of asphaltum and mummy; that many used them as solid colours (*di corpo*), whereas they should be used in glazing only, and very thin." (p. cxliv.)

are placed one above the other, as in the library of St. Mark, at Venice. In this building, designed by Sansovino in the sixteenth century, the lower order is Doric, highly ornamented, and the upper one is Ionic. In the assemblage of the orders, architects have always observed the rule of placing the orders graduating in lightness upward; for instance, the Ionic above the Doric, and the Corinthian over the Ionic. Such is the arrangement observed in the Colosseum, at Rome. (See *Amphitheatre*.)

**ASSEMBLY ROOM.** A large apartment used for public balls, ceremonial gatherings, banquets, and other entertainments.

A building constructed for such purposes should contain, in addition to the principal apartment or assembly room proper, a lesser meeting room, which may conveniently open into the assembly room, and serve as a reception room thereto, a supper or refreshment room, tea and card rooms, two or more dressing and cloak rooms, a large entrance hall in which the departing guests may prepare and wait for their carriages, a vestibule, and an exterior portico, with a cover for the carriages whilst setting down or taking up the guests. In large establishments where banquets are to be held, complete kitchen arrangements and offices must be provided, and also dwelling rooms for the keeper. The assembly room should be provided with a recess, fitted up for the accommodation of a small orchestra.

**ASSER.** The term used by Vitruvius to designate the smaller or common rafters on which the roofing tiles were laid (Book iv., cap. ii). He remarks:—"On the rafters are laid purlines (*templa*), and again on these, to receive the tiles, are placed common rafters (*asseres*), which must be of sufficient length to cover the walls and protect them. . . . As in works of the Doric order triglyphs and mutuli were first used, so in Ionic works the use of dentils was first introduced: for as the mutuli bear a resemblance to the projecting feet of the principal rafters, so, in the Ionic order, *the dentils imitate the projection of the common rafters*,"\* or *asseres*.

**ASSURGENT.** In heraldry, the term employed to describe the condition of a human being, or an animal, when delineated as rising out of the sea.

**ASSYRIAN ARCHITECTURE.** The term employed to individualise the style of architecture which, so far as modern research has been able to decide, had its origin on the banks of the Tigris and the Euphrates, produced its greatest development in the vast city of Nineveh and its neighbourhood, and reached its culminating point in the reign of Sennacherib, in the beginning of the eighth century before Christ.†

\* Gwilt's translation.

† Dr. Hincks gives the date of his accession 703 B.C., and Colonel Rawlinson B.C. 716.



Whether Assyrian architecture was purely an original style, created and developed by the genius of the Semetic race in the valleys of these great rivers, or was simply a development of some earlier style, is a question which is now beyond the reach of solution. In this respect the architecture of Assyria is like that of Egypt, whose beginning is lost in the mists of time.

The styles of Assyria and Egypt may be safely looked upon as the two foundation styles of art architecture; and it is not difficult to understand their being originated about the same period in the world's history without being in any way influenced by each other. We are not now alluding to the Pyramids, which are certainly the earliest monuments of human skill in existence, and which were probably constructed before any attempts in the shape of architectural structures were made in the Tigris valley. Some writers appear to favour the idea that Assyrian architecture had an earlier birth than the Egyptian; that, indeed, it was the first of all the styles of building, rude and simple at its beginning, and gradually becoming developed as the habits of the people became more settled and the power and wealth of the kings increased. On this subject Mr. Huggins remarks:—"It seems not impossible, indeed, that if the earliest monuments of this style remained to us, and we could trace it to its source, it might prove the first form which architecture assumed in the world, and from which all others emanated; initiated, perhaps, by the 'mighty hunter' himself in the erection of 'Babel (Babylon), and Erech, and Accad, and Calneh, in the land of Shinar,' from whence Ashur went forth and built Nineveh, the city Rehoboth, and others. As exhibited in Mr. Fergusson's restorations of the palaces of Nineveh, it bears something of the air of a style that would arise from the imitation of nature: I mean of that kind of structure that instinct and climate would lead man in his early state, in such a country as Mesopotamia, to form for himself—a style into which the genius of the forest bower had breathed consistency and beauty." This theory has much to recommend it, but it equally favours our own supposition that both Assyrian and Egyptian architecture may have had a coetaneous birth from similar though quite distinct sources. It is surely quite as easy to trace the origin of the pyramid to the primitive tent, hastily formed of four poles, fastened together at top, and covered with skins stretched over them, as to trace the first suggestion for the Assyrian palace to a tent formed of four vertical poles, covered at top and up to a certain height round the sides with boughs of trees or with skins of animals killed in the chase.

If it is a fact, as certain monumental records of Egypt are said to inform us, that the Egyptians penetrated into Assyria during the fifteenth century before Christ, and, to a more or less important extent, held it under subjection for about a century afterwards; we might naturally expect to observe in Assyrian architecture some unmistakable evidences of this intimate connexion with the Egyptians. Such evidences are not forthcoming, for in none of the remains brought to light are there any traces of

a decided reflection from the architecture of Egypt. There have certainly been none of the buildings erected during this period preserved; those of any importance which may have been constructed under the directions or for the accommodation of the conquerors, were probably not of a highly permanent character, and were either removed during the great period of Assyrian art which was ushered in by the accession of Ninus (about 1340 B.C.), or naturally fell to decay in the lapse of time.

One cannot, however, compare the sculptures of Egypt and Assyria without feeling that there must be some link between them; the androsphinx of Egypt, and the human-headed lion and bull of Assyria, have too much in common to be purely accidental. They differed in mode of treatment, disposition with reference to the structures with which they were associated, and in the prevailing positions in which they were sculptured; but they were alike in symbolic signification, being understood to express regal dignity and power—they were emblems of the king. They probably had, in addition, certain reference to the dogmas of the cults of these ancient nations; we know that the bull, for instance, was, from its strength and virility, looked upon by the Assyrians and other ancient races as the symbol of the active principle in nature—as the “Creator.” Some biblical commentators have endeavoured to trace a connexion or likeness between the winged and human-headed bull of the Assyrians and the cherubim of the Hebrews; describing the latter to have been a creature with the body of an ox or a lion, with the wings of an eagle and the head of a man.\* Such a connexion may have existed, but it must have carried with it a similarity in symbolism. There is a great probability that the composite creatures of the Assyrian sculptures, the sphinx of Egypt, and the cherubim of Solomon’s temple, had all their beginning in some earlier original—the embodiment of the mysteries of some primitive cult, regarding the direction of whose worship there can be little uncertainty.

Before leaving the subject of Assyrian symbolic art, we may briefly allude to another device repeatedly met with in the sculptures of Nineveh, namely, the peculiar ornament which has been designated the “*asherah*” or “grove,” and is represented in the centre of Fig. 1. The chief feature in this is the central tree-like form, the male date-palm, and the well-known emblem of Baal, the sun, the phallus, and life. But beyond this, the “grove” is an extremely complex symbol, which, in this place, it is unnecessary for us to enlarge upon.†

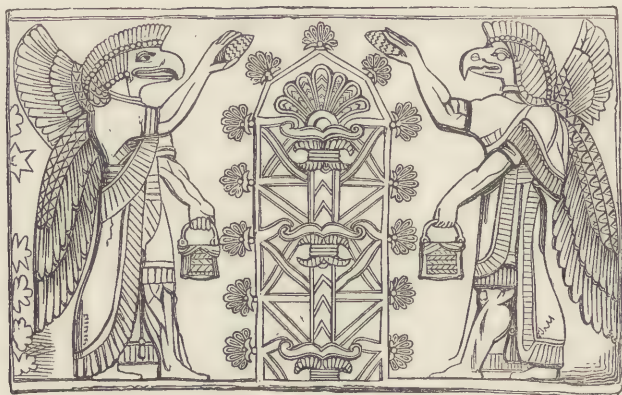
In Egyptian art the date-palm was used to represent the tree of life, and in the description of the decorations of Solomon’s temple, we are told that palm trees and open flowers (observe the open flowers all round the “grove” delineated in Fig. 1) were associated with the cherubim. On this subject Mr. Newton remarks:—“The date-palm is figured as a tree of

\* Calmet’s *Dictionary of the Bible*.

† The student who desires to follow this subject further should read the article on “The Assyrian ‘Grove’ and other Emblems,” by John Newton, M.R.C.S., in Inman’s *Ancient Pagan and Modern Christian Symbolism*. Lond., 1875.



life on an Egyptian sepulchral tablet, older than the Exodus, now preserved in the museum at Berlin. Two arms issue from the top of the tree; one of which presents a tray of dates to the deceased, whilst the other gives him water, 'the water of life.' The tree of life is represented by a date-palm on some of the earliest Christian mosaics at Rome. Something very



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like the Assyrian Asherah, or sacred emblem, was sculptured on the great doors of Solomon's temple, by Hiram, the Tyrian (1 Kings vii. 13-21). We read, 'he carved upon them carvings of cherubims and palm trees and open flowers, and spread gold upon the cherubims and palm trees.' (1 Kings vi. 32-35)."

\* The connexion above noted can hardly be considered accidental, and we have no alternative in believing that all these symbols have either been derived from one primal source, of which there is no record, or that they have been borrowed one from the other. If the latter hypothesis has to be accepted, we are called upon, with the information and materials at our disposal, to yield the priority to the art of Egypt. It is, indeed, highly probable that in such symbolical and ornamental details as those just alluded to, the Assyrians may have borrowed, or derived suggestions at least, from the works of the Egyptians, executed during their dominion in the Tigris valley. On the subject of Assyrian sculpture and ornament, the remarks of Mr. Owen Jones are both pertinent and interesting; we accordingly give them here:—"Rich as has been the harvest gathered by Mons. Botta and Mr. Layard from the ruins of Assyrian palaces, the monuments which they have made known to us do not appear to carry us back to any remote period of Assyrian art. Like the monuments of Egypt, those hitherto discovered belong to a period of decline, and of a decline much further removed from a culminating point of perfection. The Assyrian must have either been a borrowed style, or the remains of a

\* *Ancient Pagan and Modern Christian Symbolism*, by Dr. Inman, p. 129.



more perfect form of art have yet to be discovered. We are strongly inclined to believe that the Assyrian is not an original style, but was borrowed from the Egyptian, modified by the difference of the religion and habits of the Assyrian people.

“On comparing the bas-reliefs of Nineveh with those of Egypt we cannot but be struck with the many points of resemblance in the two styles; not only is the same mode of representation adopted, but the objects represented are oftentimes so similar, that it is difficult to believe that the same style could have been arrived at by two people independently of each other.

“The mode of representing a river, a tree, a besieged city, a group of prisoners, a battle, a king in his chariot, are almost identical,—the differences which exist are only those which would result from the representation of the habits of two different people; the art appears to us to be the same. Assyrian sculpture seems to be a development of the Egyptian, but, instead of being carried forward, descending in the scale of perfection, bearing the same relation to the Egyptian as the Roman does to the Greek. Egyptian sculpture gradually declined from the time of the Pharaohs to that of the Greeks and Romans; the forms, which were at first flowing and graceful, became coarse and abrupt; the swelling of the limbs, which was at first rather indicated than expressed, became at last exaggerated; the conventional was abandoned for an imperfect attempt at the natural. In Assyrian sculpture this attempt was carried still farther, and while the general arrangement of the subject and the *pose* of the single figure were still conventional, an attempt was made to express the muscles of the limbs and the rotundity of the flesh; in all art this is a symptom of decline, Nature should be idealised, not copied. Many modern statues differ in the same way from the Venus de Milo, as do the bas-reliefs of the Ptolemies from those of the Pharaohs.

“Assyrian ornament, we think, presents also the same aspect of a borrowed style and one in a state of decline. It is true that, as yet, we are but imperfectly acquainted with it; the portions of the Palaces, which would contain the most ornament, the upper portions of the walls and the ceilings, having been, from the nature of the construction of Assyrian edifices, destroyed. There can be little doubt, however, that there was as much ornament employed in the Assyrian monuments as in the Egyptian: in both styles there is a total absence of plain surfaces on the walls, which are either covered with subjects or with writing, and, in situations where these would have been inapplicable, pure ornament must have been employed to sustain the general effect. . . .

“Assyrian ornament, though not based on the same types as the Egyptian, is represented in the same way. In both styles the ornaments in relief, as well as those painted, are in the nature of diagrams. There is but little surface-modelling, which was the peculiar invention of the Greeks, who retained it within its true limits, but the Romans carried it to great excess, till at last all breadth of effect was destroyed. . . .

"With the exception of the pine-apple on the sacred trees, and in the painted ornaments, and a species of lotus, the ornaments do not appear to be formed on any natural type, which still farther strengthens the idea that the Assyrian is not an original style."\*

We do not consider that Mr. Owen Jones had any valid authority for looking on the pine-apple as the type followed in those objects met with in certain representations of the symbolic palm, or in the same objects carried in the hands of the winged figures in Assyrian sculptures (see Fig. 1). They appear to be representations of a description of pine-cone. But Mr. Layard remarks :—"The first servant following the guard bore an object which I should not hesitate to identify with the pine-apple, unless there were every reason to believe that the Assyrians were unacquainted with that fruit. The leaves sprouting from the top proved that it was not the cone of a pine-tree or fir. After all, the sacred symbol held by the winged figures in the Assyrian sculptures may be the same fruit, and not, as I have conjectured, that of a coniferous tree."† Mr. Owen Jones has quite overlooked the most important type on which the "sacred tree" itself is formed, namely, the date-palm to which we have already alluded.

This has been rather a lengthy digression for the purpose of placing before the student the arguments which have been advanced to prove that the architecture of Assyria, so far as modern exploration has revealed it, is not an original or primal style. We shall now attempt to briefly describe that architecture in its general aspect.

The architecture of Assyria has only been known to us since the year 1843, in which the earliest discoveries were made; since then, thanks to M. Botta, Mr. Austen H. Layard, and the other diligent explorers, enough has been revealed to enable us to form a tolerably accurate idea of the style employed by the architects of Assyria in the construction of their palaces or palace-temples from the time of Ninus or the middle of the fourteenth century before Christ. Mr. Fergusson remarks :—"This second or great Assyrian period divides itself again into two epochs, the first extending from Ninus (1341) to the revolt of Arbaces (821), a period of 520 years. To this age belong the North-west palace of Nimroud, the Central palace, the rock-cut sculptures at Bavian, and generally all the older monuments of the Assyrian period. The second epoch extends over only 221 years, from Arbaces to the destruction of Nineveh, about the year 606, and, so far as architecture is concerned, is by far the most brilliant. To it belong the palace at Khorsabad, built by Sargon (Shalmaneser?) about 722 B.C., that of Koyunjik by Sennacherib (703), the South-west palace of Nimroud by Esarhaddon (690), and the North palace of Koyunjik, built apparently by a son of Esarhaddon. These are the most splendid edifices yet discovered, and, now that the inscriptions have been deciphered,

\* *Grammar of Ornament*. Owen Jones, Lond., 1856.

† *Nineveh and Babylon*, p. 338.



there can be almost no doubt either as to the name of the king who built them, or to the approximate dates above given for their erection."

To whatever country we direct our attention, we invariably find that the architecture of that country has been developed under certain conditions imposed by the building materials afforded by its quarries, forests, and mines. In Assyria there were few advantages offered in the shape of natural productions; throughout the vast alluvial plains, through which the Tigris and Euphrates flowed, little was to be found ready for the builder's hand save occasional masses of a coarse variety of alabaster or gypsum, and a thick alluvial deposit suitable for forming bricks, after the primitive fashion. Such were the chief materials at the disposal of the Assyrian builders; and with them they reared their majestic palaces and strongholds. Two kinds of bricks were manufactured; one from the clay mixed with chopped straw, moulded, and dried in the sun; and the other moulded, stamped with inscriptions, and kiln-burnt. The alabaster was chiefly used for facing the walls; and for this purpose was cut into slabs of as large superficial dimensions as possible, the largest and best being reserved for the main entrances to the halls and chambers. To what extent wood was used we unfortunately have no satisfactory means of judging; but it was in all probability largely employed in the construction of the ceilings, upper chambers, and roofs. Cedar beams have been found in the excavations, as Layard records in the following passage:—"Standing one day on a distant part of the mound, I smelt the sweet smell of burning cedar. The Arab workmen, excavating in the small temple, had dug out a beam, and, the weather being cold, had at once made a fire to warm themselves. The wood was cedar, probably one of the very beams mentioned in the inscription\* as brought from the forests of Lebanon by the king who built the edifice. After a lapse of nearly three thousand years it had retained its original fragrance. Many other such beams were discovered,† and the greater part of the rubbish in which the ruin was buried consisted of charcoal of the same wood. *It is likely that the whole superstructure, as well as the roof and floor of the building, like those of the temple and palace of Solomon, were of this precious material.*"

These materials — bricks, alabaster, and wood — were chiefly what the Assyrians appear to have used in the construction of their buildings. Stone was a scarce material, and had to be brought from a distance; it was, therefore, used only where it was of the greatest value, namely, in facing the brick retaining-walls of the artificial mounds or platforms, upon which the palaces were erected.

As there were no natural eminences throughout the plains watered by the Tigris and Euphrates, artificial ones had to be constructed, chiefly for purposes of security and defence; but doubtless also with the view of giving great dignity and importance to the palaces, and securing free

\* He here alludes to the inscription on a large pavement slab of alabaster, found in a recess of one of the chambers at Nimroud.—Translated in *Nineveh and Babylon*, pp. 354–56.

† Several specimens are now in the British Museum.

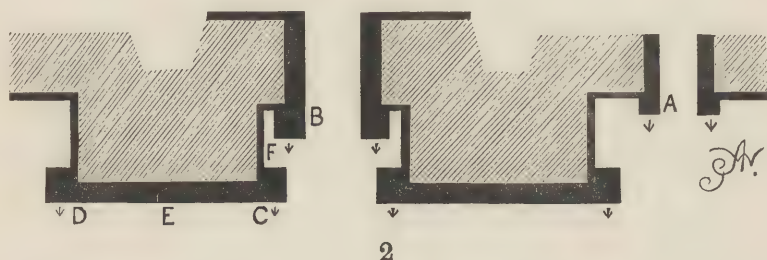


circulation of air, not always pure and abundant close to the surface of the plains. These were formed of sun-dried bricks and earth, and carried to a height of from thirty to forty feet above the plain; the sides being protected by well-built masonry. Speaking of Khorsabad, Mr. Fergusson says:—"The mound in this instance was a square of about 650 ft. each way, raised about 30 ft. above the level of the plain, and protected on every side by a supporting wall cased with stone of very beautiful masonry. Behind this, and inside the city, was a lower mound, about 300 ft. in width, and 1,300 or 1,400 ft. in length, on which were situated the great portals of the palace, and the residences of the guards and inferior officers; and beyond even this, on the plain of the city, a set of interportals are found, from which the great winged bulls now in the British Museum were taken." This arrangement could not fail to impart a most imposing effect to the palace, which stood on the outer or higher platform; whilst the long approach from the city, up numerous flights of steps and along terrace after terrace, rich in historic and mythological sculptures, and beset with all the ceremonial and military grandeur so much valued by the ancient eastern monarchs, must have been impressive indeed, probably more so than were the great approaches to the palace-temples of Egypt.

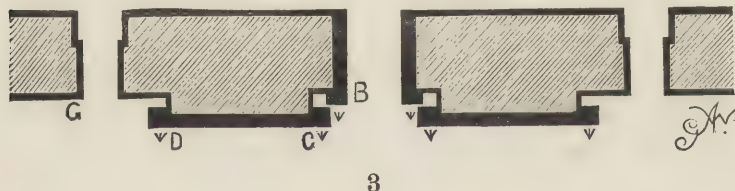
Thanks to the labours of Botta and Layard, we have materials sufficient to form a tolerably correct idea of the ground plan and the decorations of the lower walls of an Assyrian palace. The plan does not differ in general treatment in any of the discovered buildings; it consists of long apartments, opening one from the other, and approached from large courts. These apartments are divided by thick walls (from 5 to 15 feet) constructed of sun-dried bricks, and faced, rarely to a height exceeding twelve feet, with slabs of alabaster, inscribed on the back before they were fixed, and sculptured on the face after they were secured in their places. The sculptures chiefly represent religious subjects, wars carried on by the owner of the palace, his amusements, and certain events connected with his reign. Above these sculptured slabs, the walls were carried up several feet, faced with burnt bricks richly decorated with colour, or built of sun-dried bricks, covered with a coat of plaster, and painted with figures and ornamental devices. In the inferior apartments the alabaster slabs were omitted, and the walls were entirely plastered and painted. Above the height thus arrived at all is uncertain, and will doubtless ever remain so; but we may here remark that the ingenious speculations on the subject by Mr. Fergusson, in his interesting work, *The Palaces of Nineveh and Persepolis Restored*, well deserve the careful attention of the student of ancient architecture; and we have much pleasure in referring him to that valuable treatise.

The most important portions of the Assyrian palace yet remain to be described; these are the great entrances to the chief apartments from the courts or terraces. In the three great palaces of Nimroud, Khorsabad, and Koyunjik, all the chief entrances were flanked with gigantic winged and man-headed bulls, sculptured in bas-relief on thick slabs of alabaster set

upright on edge; the bulls varying from ten to sixteen feet high. When two of these creatures were used, they faced the court, their bodies extending inward on each side of the entrance-way, as at A, on plan Fig. 2, a



portion of a façade in one of the courts at Khorsabad; the arrow-heads indicate the direction of their faces. When additional importance was desired four bulls were brought together at the entrance, two on each side, with their bodies extending at right angles to each other, but with their faces towards the court. In Figs. 2 and 3, plans of two modes of arranging the bulls are given, both from Khorsabad. In Fig 2, the inner bulls B are recessed considerably behind those C, which extend along the façade, and are of much larger dimensions. The recesses between them are faced



with slabs F, sculptured with winged figures. In Fig. 3, the inner bulls almost touch those of the façade; and are, as in the previous case, of larger dimensions than the front ones.

As will be observed on reference to the plans, the great entrances are placed in the centre of projecting portions of the façades; these are flanked by bulls D, placed tail against tail with those next the entrance, as in Fig. 3; or with a colossal figure of Nimrod dividing them, as at E, in Fig. 2. The sides or jambs of the inferior entrances, G, were almost invariably formed of sculptured slabs meeting together at right angles; a deity or some other important figure being sculptured on each side close to and looking towards the opening. The entrances to two small structures excavated at Nimroud, supposed by Layard to be temples, were formed of colossal lions, one pair of which measured sixteen and a half feet high and fifteen feet long, and were man-headed. Of the entrance to the other temple Layard says:—"This gateway was formed by two colossal lions



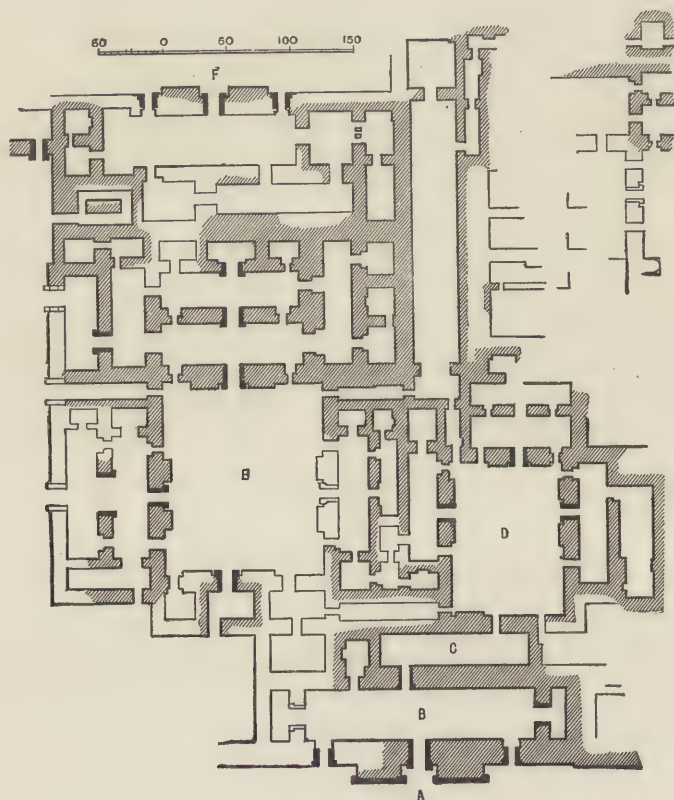
with extended jaws, gathered-up lips and nostrils, flowing manes, and ruffs of bristly hair. The heads, though to a certain extent conventional in form, were designed with that vigor so remarkably displayed by the Assyrian sculptor in the delineation of animals. The limbs conveyed the idea of strength and power, the veins and muscles were accurately portrayed, and the outline of the body was not deficient in grace and truth. But the front of the animal, which was in full, was narrow and cramped, and unequal in dignity to the side. In the general treatment the whole sculpture had much of that peculiar feeling and character that mark the archaic monuments of Greece, and it was on this account peculiarly interesting. In it, indeed, we may perhaps trace those conventional forms from which the Greek artist first derived his ideal Lion." The dimensions of the animals were fifteen feet in length by about eight feet in height. One of these lions is preserved in the British Museum. For further remarks on these sculptures see articles *Bull* and *Lion*.

As even this brief dissertation would be most incomplete without some further reference to the general arrangement of the apartments in an Assyrian palace, we give the plan of the extensive remains of that at Koyunjik, built by Sennacherib (B.C. 702), the son of king Sargon, who built the palace of Khorsabad (B.C. 722). The palace at Koyunjik was probably the largest of all the Assyrian buildings; the platform upon which it was erected was about a mile and a half round its retaining wall and above thirty feet high, every portion of which was raised artificially. The palace proper was built towards the south-western angle of the platform; and the portions which were excavated by Layard extended over an area of about six hundred feet square. These portions are indicated on plan Fig. 4, copied from that in *Nineveh and Babylon*. The principal façade A had an E.N.E. aspect, was of great size and richness, presenting no fewer than ten winged bulls, six of which were of great size. The central or grand entrance to the palace, was treated similarly to that at Khorsabad, Fig. 2. Between the four bulls of the projecting portions of the façade, were colossal figures carrying a lion in their arms, almost identical with the arrangement at Khorsabad. The three portals opened into a large hall B, 180 feet long by 40 feet wide, exclusive of the large recesses at each end. Two doorways from the hall gave access to a small chamber, and another elongated apartment C, through which latter an inner court D was reached; Layard calls this "the great hall" of the palace, and its situation, with chambers on all sides, would certainly incline one to believe that it could not have been simply an open court. It measured about 120 feet by 90 feet. From this court or hall numerous large apartments opened through portals flanked by winged bulls. All this portion of the palace was probably devoted to state ceremonies and receptions; the remaining portions opening from the large court E formed the hareem or private apartments of the palace. The façade F was towards the Tigris and the open plain; and before it, and extending to the outward retaining wall of the platform, there was in all probability a



spacious paved terrace for the exercise and amusement of the inmates of the hareem. The principal entrance was, as at Khorsabad, approached from the city side.

On examining the plans which have been made of Assyrian palaces, one observes that all walls, apartments, and entrance-ways are rectangularly

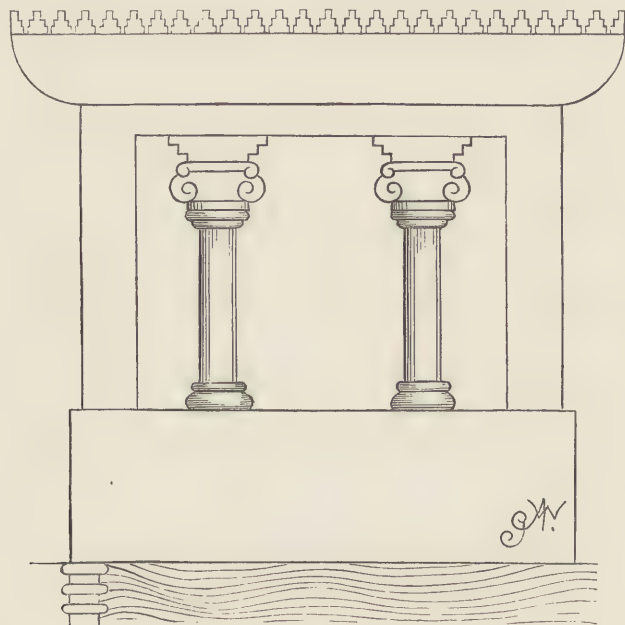


## 4

disposed ; and nothing sloping or inclined has been found in the construction of the walls or doorways. In these respects Assyrian architecture materially differs from Egyptian, in which the sloping line is so important an element.

And now, in conclusion, we must say a few words relative to the opinions held as to modes of constructing the upper parts and roofs of Assyrian buildings. It is much to be regretted that throughout all the bas-reliefs which have been discovered there is not one representation of an Assyrian palace ; had there been a single elevation of a façade, from platform to roof, we should experience little difficulty in restoring a palace with tolerable accuracy. There has not been found the remains of a single column in the ruins of any of the buildings ; and had it not been for the

representation of a small pavilion in one of the bas-reliefs at Khorsabad, and a sort of tower in those of Koyunjik, we should not have at the present time any authority for believing that the Assyrian architects employed columns at all. In Fig. 5 is given a drawing of the pavilion, devoid of the irregularities and injured parts which obtained in the original sculpture. The most remarkable feature here is the capital which bears a decided resemblance to the Ionic capital afterwards introduced by the



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Greeks. In the other bas-relief, found at Koyunjik, representing a sort of tower or stronghold, small columns or balusters are introduced, with capitals having the volute form indicated in the simplest manner. If the Assyrian architects introduced columns in their palace construction, they must have been of wood, and their total disappearance can readily be accounted for by the conflagrations which destroyed the discovered buildings; it is strange, however, that, whilst cedar beams were found in good preservation, not a fragment of a column has been found. It is stranger still that no indications of the use of columns have been discovered, though diligently sought for. It is hardly likely that wooden pillars would have been placed simply resting on the floor or on the top of the brick walls, without the intervention of a spreading base, or block of some hard and durable material, resting on a special foundation. If the roofs were formed of the alluvial deposit of the plains, laid on to a great thickness, the weight supported by the wooden columns must have been immense, and firm and solid foundations an absolute necessity. Neither bases nor traces of such foundations have been discovered.

Mr. Fergusson, who has given more earnest attention to the interesting subject of the restoration of an Assyrian palace than any other student of art, is convinced that columns were largely used for the support of the ceilings and roofs; and his drawings certainly show great power of conception and deep study in this direction. In his restorations he shows the walls terminated, above the sculptured slabs and the painted brickwork, with ornamental cornices and balustrades, making the tops of the thick walls into galleries, and practically the upper story of the building. Considerably elevated above the galleries are the ceilings, which extend over them and the apartments below, supported upon dwarf columns resting on the galleries, and lofty columns rising from the ground floor of the building. Above the ceilings he constructs the roofs with just sufficient fall to throw off the rain. Speaking on the subject, he says:—"It will be observed that the area covered by the walls is of nearly the same extent as that of the rooms themselves" (see Fig. 4), "so that the galleries formed in fact an upper story to the palace; and thus, in the heat of the day, the thickness of the walls kept the inner apartments free from heat and glare, while in the evenings and mornings the galleries formed airy and light apartments, affording a view over the country, and open on every side to the breezes that at times blow so refreshingly over the plains. It will also be observed that by this arrangement" (that of the elevated roof extending over both galleries and apartments) "the direct rays of the sun could never penetrate into the halls themselves, and that rain, or even damp, could easily be excluded by means of curtains or screens."

Mr. Layard agrees, generally, with Mr. Fergusson's ideas; but he points out that certain inner chambers, such as were found at Koyunjik, must have been ceiled over, and accordingly almost in entire darkness. He adds, "And it is not improbable that such was the case, to judge from modern Eastern houses, in which the absence of light is considered essential to secure a cool temperature. The sculptures and decorations in them could then only be seen by torchlight. The great halls were probably in some cases entirely open to the air, like the court-yards of the modern houses of Mosul, whose walls are still adorned with sculptured alabaster. When they were covered in the roof was borne by enormous pillars of wood or brickwork, and rose so far above the surrounding part of the building, that light was admitted by columns and buttresses immediately beneath the ceiling. It is most probable that there were two or three stories of chambers opening into them, either by columns or by windows. Such appears to have been the case in Solomon's temple; for Josephus tells us that the great inner sanctuary was surrounded by small rooms, 'over these rooms were other rooms, and others above them, equal both in their measure and numbers, and that these reached to a height equal to the *lower part* of the house, for the upper had no buildings about it.' We have also an illustration of this arrangement of chambers in the modern houses of some parts of Persia, in which a great central hall,



called the Iwan, rises to the top of the building, and has small rooms in two or three separate stories, opening by windows into it, whilst the inner chambers, having no windows at all, have no more light than that which reaches them through the door. Sometimes these side chambers open into a centre court, as I have suggested may have been the case in the Nineveh palaces; then a projecting roof of woodwork protects the carved and painted walls from injury by the weather."

Such, then, are the opinions of two men who have deeply studied and carefully considered the subject; and they carry us as far as modern research in all probability ever will. But as we carefully examine the plans of all the excavated palaces, and bear in mind the entire absence of absolute proofs of the use of columns in their construction, the question, inevitably arises, Do not those opinions carry us too far? In such large buildings, with many galleries and upper chambers, it is rather a remarkable thing to note the entire absence of staircases to give access to them. In none of the plans we have seen are there any indications of internal staircases, such as might be expected to exist had the tops of the walls been used as terraces of daily resort, or had there been stories of chambers occupied by the inmates. Wooden staircases may certainly have been used, but they would hardly have been dignified enough to suit the taste of the Assyrian kings. It is probable, however, that the galleries were approached from an elevated terrace, with a grand flight of steps from one of the inner courts of the private part of the palace.

In conclusion we may allude to the views held by M. Viollet-le-Duc, who places aside the theories of both Mr. Fergusson and Mr. Layard, and boldly introduces the vault as the covering adopted by the Assyrian architects. In his interesting work, *The Habitations of Man in all Ages*,\* the subject is fully treated; and it is opened by the following passages—a question followed by an answer from the lips of an imaginary Assyrian architect:—

"‘Allow me,’ said Epergos, ‘to admire the exterior of this portal, which is crowned by an arch, a thing, which I have never seen elsewhere. It surprises me strangely. Who, then, taught you this method of building?’

"‘Necessity. Forests do not abound here as in Media; it is extremely difficult to convey wood hither; besides heat makes timber quickly perish when it is in contact with clay; moreover, timber coverings, even when overlaid with earth—the plan adopted in some regions to the north—do not afford a sufficiently cool temperature within. We are obliged, therefore, to do without wood, and to build entirely with clay. It was only by gradual means that our predecessors came to invent this vaulting.’"

M. Viollet-le-Duc proceeds to describe the progressive steps by which the Assyrians arrived at the true modes of vaulting, and then describes the interior of a palace, in which all the entrances are arched, and all the apartments covered with semicircular vaults, and lighted by means of

\* English edition, translated by B. Bucknall. Lond., 1876.

elevated demi-cupolas.\* There is little doubt that he arrived at his ideas, firstly, from the fact that no columns, or traces of columns, have been found in the excavated buildings; and, secondly, from the fact that vaults and arches have been discovered, proving that the Assyrians were acquainted with their construction. M. Place, while French Consul at Mosul, made extensive excavations at Khorsabad, and discovered a pair of the city gates, placed side by side and arched over. One of these had evidently been used as a chariot entrance, and the other by pedestrians. The former had a semicircular arch, decorated with a sort of archivolt of blue and yellow enamelled bricks, rising from plain jambs. The gateway for foot-passengers was also covered with an arch springing from the backs of winged man-headed bulls. This latter example has certainly given M. Viollet-le-Duc ample authority for restoring his Assyrian palace, with gateways flanked by bulls and surmounted with arches faced with glazed bricks. In the mound at Nimroud, a chamber (ten feet in width), vaulted with kiln-burnt bricks, and several vaulted drains were discovered; plainly proving, as we have already said, that the Assyrian builders were perfectly conversant with the principles and true construction of the vault.

We have felt it our duty to thus briefly place before the student the different views which have obtained with reference to the mode of roofing the great buildings of Assyria; and we are compelled to point out that there are good arguments to be advanced on both sides, although those which are best supported by the discoveries made are in favour of M. Viollet-le-Duc's views.

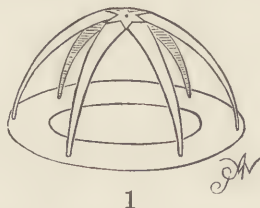
Having said as much on the subject of Assyrian architecture proper as our space will permit, leaving that of Babylon to our brief article on *Babylonian Architecture*, we advise the student who desires to go more deeply into the subject to consult the following works: *Monument de Ninive*, by Botta, fol., Paris, 1848; *The Monuments of Nineveh*, by Layard, fol., Lond., 1849; *A Second Series of the Monuments of Nineveh*, by Layard, fol., Lond., 1853; *Nineveh and its Remains*, by Layard, 8vo., Lond., 1849; *Nineveh and Babylon*, by Layard, 8vo., Lond., 1853; *The Palaces of Nineveh and Persepolis Restored*, by Fergusson, 8vo., Lond., 1851; *Handbook of Architecture*, by Fergusson, 8vo., Lond., and *Ninive et l'Assyrie*, by V. Place, fol., Paris, 1870.

**ASTERISCUS.** (*Gr.* ἀσθήριςκος). A small star-shaped metal plate, with its points bent downward, as in the Fig 1, used in early times for the purpose of preventing the veil from displacing or touching the bread lying on the paten during the consecration of the elements in the Holy Eucharist.

The asteriscus is believed to have been introduced by St. Chrysostom, but the exact form he used is not known; from the name given to it, it probably resembled that shown in the accompanying cut. In later times

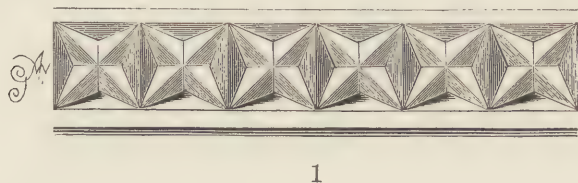
\* The student should consult M. Viollet-le-Duc's work (pp. 140-149), in which several illustrations are given.

it assumed more the form of a cross, being fashioned of two arched bars either fastened or pivotted together in the centre. When pivotted, the



two portions could be folded together when not in use. A late Latin term occasionally used for the asteriscus is *STELLULA*.

**ASTORITE.** The term sometimes used to individualise the enrichment, as in Fig. 1, formed of star-like designs produced by an arrangement of triangular sinkings, frequently met with in Norman architecture.



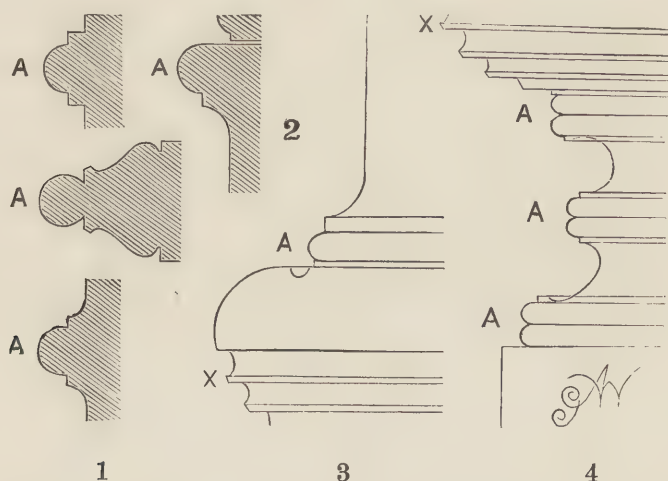
Examples are to be found at Herringfleet, Suffolk; Stringham, Norfolk; White Tower, Tower of London; and at Thaon, near Caen, and numerous other buildings in Normandy. Another example, in which small balls are introduced in the sinkings, is given in article *Abacus*, Fig. 7. This enrichment is also called the *STAR ORNAMENT*.

**ASTRAGAL.** The term employed to designate a small projecting moulding which commonly varies in section between a half and three-quarters of a circle, as at A A A, Fig. 1. The term is almost exclusively applied to the moulding as it appears in Classic architecture; for although a moulding of a similar section is met with in the mediæval styles, it is not generally called an astragal.

In speaking of the astragal of a column, the semicircular member at the top of the shaft, immediately under the capital, is generally understood to be alluded to, A, Fig. 2. This member appears in all the Orders save the Grecian Doric, where its place is taken by the annulets. Vitruvius, however, does not use the term in this sense, but speaks of the astragal (Book iii., cap. 3) in connexion with his Ionic base thus:—"If Ionic, they are to be set out so that the base may each way be equal to the thickness and three-eighths of the column. Its height and that of the plinth the same as the attic base. The plinth is the same height as in that of the attic base, the remainder, which was equal to one-third part of the column's diameter,



must be divided into seven parts, three of which are given to the upper torus ; the remaining four parts are to be equally divided into two, one of which is given to the upper cavetto, with its *astragals* and listel, the other to the lower cavetto, which will have the appearance of being larger, from its being next to the plinth. The *astragals* must be an eighth part of the scotia, and the whole base on each side is to project three-sixteenths of a diameter." The introduction of several astragals is to be observed in two remarkable Ionic bases, namely, those of the temples of Apollo Didymæus,



near Miletus, and Minerva Polias, at Priene. The latter base is represented in Figs. 3 and 4, in two parts, which join at the member marked X in both drawings.\* It will be observed that the lower portion, Fig. 4, consists of two scotiæ and six astragals, divided into three groups of two each, and separated from the edges of the scotiæ by narrow fillets. In the upper portion, Fig. 3, an astragal will be found introduced between the torus and the fillet of the apophyge. The introduction of an astragal in this place is valuable, apart from artistic considerations, on account of the increased strength it gives to the apophyge, which in the generality of examples, with the narrow fillet only, is very weak and extremely liable to injury. (See *Apophyge*.)

In the Corinthian, Composite, and Roman Doric columns, the astragal is properly, and appears invariably in ancient examples to have been, part of the shaft, being worked along with the upper apophyge and fillet; but in the Ionic Order it properly forms a portion of the capital.† In this Order it

\* Copied from the drawing given in *The Principles of Architecture*. P. Nicholson, vol. iii., Lond., 1841.

† "Depuis long-temps tous les fûts supérieurs des colonnes sont terminés par un *astragale* qui leur appartient, et non au chapiteau, à la réserve pourtant de l'ordre appelé toscan et du dorique. Mais aux autres ordres, l'*astragale* est censé faire partie de la colonne. Plusieurs

is usually enriched as in the capitals of the temples of Bacchus, at Teos; Minerva Polias, at Priene; Apollo Didymæus, near Miletus; Minerva Polias, and the Erechtheum, at Athens. In all these examples it is cut into a bead and reel (the *Astragalum Lesbium*?). In the Grecian example from the Ionic temple on the Ilissus, at Athens; and the Roman examples from the temple of Fortuna Virilis; the theatre of Marcellus; the Colosseum, and the temple of Concord, all at Rome, the astragal is plain. In the Roman Doric Order, found at Albano, two plain astragals are introduced, one at the top of the shaft and the other under the echinus of the capital; and in the capital of the Order which existed in the baths of Diocletian, at Rome, two astragals were used, the lower being larger than the upper, and cut into a bold bead and reel.

The term astragal is correctly applied to any small projecting member in Classic or Renaissance architecture, whose section is a half or above a half of a circle, and whether it appears in circular or straight mouldings, as those of a base, archivolt, architrave, or cornice. A similar member, in Mediæval architecture, is termed a bowtell or bead. The small semi-circular moulding, or neck-moulding, which divides the shaft from the capital in early Mediæval examples, is, unlike the astragal in the generality of the Classic Orders, invariably part of the capital, the joint being under instead of above it, as in the Corinthian and other columns.

**ASTRAGALUM LESBIUM.** (*Lat.*) The term used by Vitruvius for a certain moulding which he directs to be introduced along with others in the dressings of temple doorways. It occurs in the following passage (Book iv. cap. 6):—"The cymatium is to be sculptured in the Lesbian form, with an astragal. Above the cymatium of the architrave of the dressing (supercilium), the frieze (hyperthyrum), is placed, and it is to have a Doric cymatium, with a *Lesbian astragal*, in low relief."\*

Commentators of Vitruvius differ widely in their reading of this term,

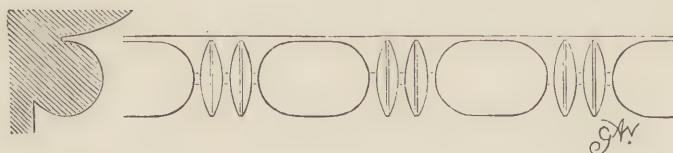
ont voulu, contre le sentiment exprès de Vitruve, que, dans l'ionique, l'*astragale* appartient au chapiteau. Ils se fondent sur ce que ordinairement il s'y trouve taillé et sculpté en chapelet, et que la taillé ou la sculpture est toujours censée appartenir au chapiteau. Cependant il est certain qu'il y a dans l'antique, comme au théâtre de Marcellus des chapiteaux ioniques dont l'*astragale* n'est point taillé, et que beaucoup de grands architectes modernes, tels que Vignole, Scamozzi, De Lorme, ne l'ont point taillé.

"Au reste, ces distinctions n'ont ordinairement lieu que dans les colonnes où l'on emploie des matières différentes pour les fûts et les chapiteaux, ou bien des couleurs de marbre varié. Lorsque toutes les parties de l'ordre sont de la même pierre. Alors l'identité de la matière empêche qu'on fasse cette remarque. Néanmoins on doit, par rapport à la construction, avoir attention que l'*astragale*, ou au moins le filet de ce membre d'architecture, appartienne au fût de la colonne ou du pilastre : en voici la raison.

"L'usage veut qu'on unisse le fût des colonnes à l'*astragale* par un congé ; or, ce congé n'est autre chose qu'un quart de cercle concave, qui ne peut pas terminer seul le fût supérieur ou inférieur d'une colonne. Il faut l'accompagner d'un membre carré, qui, par ses angles-droits, assure la solidité, le transport et la pose du chapiteau et de la colonne ; ce qui ne se pourroit, de quelque matière qu'on voulût faire choix, sans que ce congé fût sujet à se casser."—Quatremère de Quincy. *Dict. Hist. d'Arch.* Paris, 1832.

\* Gwilt's translation.

and some wander widely from the obvious signification; for instance, Baldus believes it to be an ovolo, Barbaro a cavetto, while Perrault makes it a small *talon* or *ogee*. The most probable signification, and the one now generally accepted, is an astragal cut into a bead and reel enrichment, as represented in Fig. 1.



1

In the passage above quoted, a cymatium is directed to be "*sculptured in the Lesbian form*;" the question arises, does the "*Lesbian form*" signify a peculiar contour for the cymatium, or does it mean that the cymatium is to be sculptured with a certain kind of surface ornamentation. We rather incline to the latter reading; and hence it follows that the *Lesbian astragal* is in all probability a sculptured astragal, or the common Classic bead and reel enrichment, which would be perfectly appropriate in the position mentioned by Vitruvius.

**ASTYLAR.** The term introduced by modern architects and applied to buildings which are designed without any reference to an Order; and accordingly without columns or pilasters, save as minor and simply ornamental features. In an astylar design, therefore, every liberty is given to the architect; and both the system and degree of ornamentation are matters of choice and individual taste.

**ASYLUM.** (*Gr.* ἄσυλον.) Originally, a place of sanctuary or refuge, to which slaves, debtors, and criminals flew for protection. Servius derives the term from the privative *α*, and *συλαω*, to *draw*, as no person could be taken away by force from such a place. All criminals were not, however, permitted to avail themselves of the sanctuary; those guilty of enormous crimes could be dragged from it and handed over to the officers of the law.

From the earliest times, temples, and more especially their altars, were considered the most safe and sacred of all places; and second only to these were the consecrated groves and statues of the gods. The Greek law, however, does not appear to have recognised all temples and altars as affording sanctuary, as in Athens and other cities only certain ones were set apart. The most noted one in Athens was the temple of Theseus, which was the favourite asylum of slaves who sought protection from the ill usage of their masters. When in this asylum the slave could compel his owner to sell him to another person. Bell says:—"Some of these asylums were public, and free for all men: others were appropriated to certain



persons and crimes; thus the temples of Hebe, at Phlius, and of Diana, at Ephesus, were refuges for debtors; and Strabo tells us that several princes allowed to this last, some a greater, others a less extent of ground, beyond the temple itself. The temple of Pallas, at Lacedemon, was a sanctuary even for criminals condemned to death."

The Romans do not appear to have had so many sanctuaries as the Greeks; and in the reign of Tiberius Cæsar they were abolished, one of the temples of Aesculapius and Juno Samia alone retaining the ancient privileges.

In the middle ages, as in ancient times, an altar or its vicinity was considered an asylum. In addition to such sacred localities as those in which Christian altars stood, there were certain other places, privileged by sovereigns, which afforded protection to criminals and debtors who fled to them.\* In the reign of James I. the right of sanctuary was abolished in this country.

The term is at the present time commonly applied to those institutions set apart for the relief and refuge of lunatics, the blind, the deaf and dumb, orphans, and the aged poor. When the single word, asylum, is used, without any other word or words to particularly define the description of institution alluded to, it is usually understood to signify a refuge for lunatics—a lunatic asylum.

**ASYMMETRICAL.** The term used in art, to denote that the object to which it is applied is devoid of or deficient in symmetry.

**ATACAMITE.** A term used to designate the native muriate of copper, from which green pigments of several shades are prepared.

**ATELIER.** (*Fr.*) The studio or the workroom of an artist. A building in which the practical part of any fine or decorative art is carried on.

**ATHANASIUS, ST.** One of the four Fathers of the Greek Church, and bishop of Alexandria. He was born at Alexandria about the year A.D.

\* "This was the method by which anciently the rigour of common law was moderated. It allowed the criminal time for making restitution, or under the Anglo-Saxon laws, he must have suffered immediate pains and punishments.

"The old Sanctuary of Westminster consisted of two Churches one over another, in the form of a cross.

"At Durham certain men lay in two Chambers over the North door to let in offenders whenever they knocked, however late; after which they tolled the Galilee bell, in notice of such event. When the Prior heard of it, he sent orders that they should keep within the Sanctuary, Church, and Churchyard, and wear a black gown with a yellow cross, called St. Cuthbert's cross (a token of the privilege granted to that Saint's shrine); and that they should lie upon a grate made only for that purpose, adjoining to the Galilee South door. They had also meat, drink, and bedding, for thirty-seven days, being only such as were necessary for such offenders, until the Prior and Convent could get them conveyed out of the diocese."—Fosbrook. *British Monachism*. Lond., 1843, p. 268.

297; and at an early age showed great knowledge of the literature and science of the ancients. Becoming impressed with the importance of the religious life, he fled to the desert, where he benefited by the teaching and counsel of St. Anthony. After a time of severe religious exercise he returned to his native town, where he was ordained deacon. Summoned by Constantine, he made his first appearance as an important churchman at the great Council of Nice (A.D. 325), and became celebrated as the champion of the orthodox faith, by the overpowering eloquence he there displayed in refuting the arguments of Arius and his followers. In 326 he was ordained bishop of Alexandria, and died in the year 372, after faithfully fulfilling the duties of his high calling for forty-six years, in the midst of suffering and much tribulation.

St. Athanasius appears to have been seldom represented in art, notwithstanding that there were several incidents in his life full of interest and in every way worthy of representation. Being one of the Greek Fathers, he was of course less likely to be introduced into Western art. In Greek art he is represented as an aged, but not infirm, man, with a bald head and long flowing white beard, clothed in full vestments as a bishop of the Greek Church, and carrying a closed volume of the Gospels in his hand. In the *Guide to Greek Painting*, we find the following directions for his portraiture:—"Saint Athanase d'Alexandrie: vieillard, chauve, large barbe. Il dit: 'Souvent et de nouveau nous recourons à vous,' etc."\*

In the Greek calendar he is commemorated on January 18; his translation on May 2.

**ATHENAEUM.** (*Gr.* ἀθῆναιον.) A public building appropriated to learning and the cultivation of literature and the fine arts. The name is generally understood to be derived from Ἀθηναία, Minerva, the goddess of wisdom and skill; but Dr. Smith derives it from Athens, the city renowned throughout Classic times for its learning and intellectual refinement.

The building to which the name was originally given was the institution founded by the emperor Hadrian on the Capitoline Hill, at Rome, A.D. 135, for the study and promotion of literature and the liberal arts. Caligula erected another athenaeum at Lyons. These institutions appear to have been colleges, where educational lectures and orations were given, by the most learned professors and philosophers, to classes of advanced students from the high schools of the empire.

The term is at the present time, in France, applied to an establishment devoted to educational purposes; but in England it has been applied to institutions of a semi-public character, which combine certain features of a club with those of a literary association, with its reference library, reading-rooms, lecture theatre, &c.

\* *Manuel d'Iconographie Chrétienne.* Paris, 1845, p. 316.

**ATHOR.** The Egyptian Venus, or goddess of love and beauty. She was represented wearing a head-dress surmounted with a disc and horns, and with an asp in front. She was also represented with a cow's head, and carrying a lotus sceptre and the usual symbol of life. The cow was particularly appropriated to Athor, and indeed at Momemphis she was worshipped under the form of a cow.<sup>1</sup>

**ATLANTES.** (*Gr.* ἄτλαντες.) According to Vitruvius (Book vi., cap. 10), the Greek equivalent for the term *telamones*, which is employed to designate those male figures which are placed, instead of columns, in a building, to support the entablatures. The most remarkable examples known are those in the interior of the great temple of Jupiter Olympius, at Agrigentum. From the supposition that the term was derived from *Atlas*, these figures have sometimes been designated **ATLASES**. (See *Telamones*.)

**ATRAMENTUM.** The name given by the ancients to a black pigment formed of carbonised organic substances. Pliny uses the term with this signification, and includes all the black colours produced from burnt substances. In the Table of Synonymes, in the manuscripts of Jehan le Begue, we find the following description :—" *Attramentum* est color niger quo scribitur, aliter incaustum dicitur, et vide in incausto, et de ipso quoque utitur pingendo dum fit de fuligine ardentis candele vel lampadis vel carbone mollis ligni vel vitis."<sup>2</sup> Here lamp-black and charcoal is spoken of.

In the manuscript of Peter of St. Audemar, the pigment is thus mentioned :—

"*How to make a black colour in various manners.*—Every black colour which is used in painting on skins, we know to be atramentum, distempered in various manners, except that with which we stain the skin, which is commonly called *corduanum* (cordovan). But that black colour is made of oil and scales of iron, boiled together for a very long time, and it is laid on the skin, not with a pen or a brush, but with a very sharp piece of wood, namely boxwood. But on walls, or on wood, we take charcoal, made of leather, or of hay, or of wood of any kind, except oak, which, on account of its hardness, can scarcely ever be sufficiently ground. If you wish to lay black over other colours on parchment, you must not put incaustum, but know that you must take charcoal distempered with egg, and the same on walls either with water or with egg, and on wood with oil; and whoever takes the soot of rushes and oil, where they are burnt together over a lamp, and calcines it in a jar upon coals, and grinds it with water or with egg, or with oil, will find it a very excellent colour wherever he wants it."<sup>3</sup>

The term appears to have been applied to certain kinds of ink or ingredients used in preparing ink. In the *Diversarium Artium Schedula*

<sup>1</sup> Illustrations of Athor, in her several forms, are given in *The Manners and Customs of the Ancient Egyptians*. New Ed., Lond., 1878, vol. iii., p. 114.

<sup>2</sup> *Original Treatises on the Arts of Painting*, vol. i., p. 19.

<sup>3</sup> *Ibid.*, vol. i., p. 138.



of Theophilus, it is evidently used to signify sulphate of iron, which imparts the black colour to solutions of bark or galls in the preparation of ink. In chapter 40, of Book i., atramentum is alluded to apparently with this signification, but opinions are divided on the subject. M. Hendrie, in his notes on this chapter, says :—"Atramentum is mentioned by Theophilus towards the close of this chapter. Whether the ' atramentum librarium ' of Dioscorides, composed of three ounces of soot with one ounce of gum (see Dioscor., v. 183, Περὶ μέλανος,) was intended, or the sulphate of iron, green vitrol, ' atramentum tectorium ' of the Romans, is open to conjecture. M. de L'Escalopier prefers the former hypothesis, as he has translated the word ' atramentum ' into ' noir '—black; it will be seen that I have preferred the latter in the presence of the bark juice, or tannic acid. Another atramentum, the ' atramentum sutorium ' of the Romans, or ' sulphate of copper,' blue vitrol, is certainly not intended."

In chapters 40, 68, and 74, of Book iii., on colouring gold, burnt atramentum is mentioned; here in all probability either of the above sulphates is intended.\*

Dr. Smith describes atramentum as "a term applicable to any black colouring substance, for whatever purpose it may be used. There were, however, three principal kinds of atramentum: one called *librarium*, or *scriptorium*, writing-ink; another called *sutorium*, which was used by the shoemakers for dyeing leather; the third *tectorium*, or *pictorium*, which was used by painters for some purposes, apparently as a sort of varnish."†

**ATRIENSIUM.** (*Lat.*) The term employed to designate the closet or small apartment appropriated to the *atriensis*, or the attendant who had charge of the atrium in a Roman house. Such small apartments have been found in some of the dwellings at Pompeii.

**ATRIOLUM.** (*Lat.*) This term, which is the diminutive of *atrium*, appears to have been applied to a lesser or secondary atrium in a large Roman dwelling house. An example is to be found in the house of the Dioscuri, at Pompeii, a plan of which is given in the following article. (See *Atrium*.)

**ATRIUM.** (*Lat.*) This term was used by the Romans in two senses. Firstly, to designate that portion of a dwelling-house which was directly approached from the entrance vestibule, and which was partly covered with a roof and partly open to the sky. Secondly, to designate a public building, constructed after the manner of the atrium of the dwelling-house. The latter kind of atrium was a detached building, commonly quadrangular on plan, having an internal portico extending round three of its sides and the central space open to the air. Such was the atrium publicum, erected

\* See *Theophilus—Arts of the Middle Ages*, translated by R. Hendrie. Lond., 1847.

† *Dict. of Greek and Roman Antiq.* Lond., 1863.

in the capitol, and that built on the Aventine mount, in which the legal tablets relating to the Censors were kept. The atrium Libertatis, close to the forum Cæsaris, appears to have been semicircular in plan. This class of atrium was sometimes placed in front of a temple, and formed a species of court, surrounded by a covered portico on the three unoccupied sides. A similar arrangement was adopted by the early Christian builders with relation to their basilicæ, and they naturally retained the ancient name for the feature. The basilica of St. Clemente, at Rome (fifth century), retains its atrium in a perfect state. A plan of this example is given further on in the present article.

The term CAVAEDIUM has been held by certain authorities to be synonymous with ATRIUM; and such an idea is to an extent supported in the apparently similar application of the two terms by Vitruvius, in the third and fourth chapters of his sixth book. It appears to us highly probable that he used the term cavaedium for the larger oblong part of the atrium, without the alae or other adjuncts; while by the term atrium he desired to signify the entire part of the house in the centre of which the cavaedium was situated.\*

Notwithstanding the directions given by Vitruvius (Book vi., cap. 4) for the proportions and disposition of the essential portions of an atrium, we should have known little about this important part of an ancient dwelling had it not been for the discoveries made at Pompeii. Now we can tread the floors of many atria which were worn by the feet of illustrious citizens of Pompeii more than eighteen hundred years ago; and it requires but little skill to restore, in imagination, these atria to their original and perfect state. We shall first briefly note the directions of Vitruvius for the planning and construction of the atrium; and then direct the student's attention to certain representative examples found at Pompeii.

Vitruvius tells us that the proportions of atria vary, and he gives three rules to guide the architect. First, that the length decided on is to be divided into five parts, and that the width is to be equal to three of these parts. Second, that the length is to be divided into three parts, two of which give the width. Third, that a right-angled triangle is to be drawn,

\* "VARRO, *De Ling. Lat.* iv, states, that the cavædium was a covered large space, used in common within the walls of a house, and called Tuscanicum, after the Romans began to imitate the manners of the Tuscii: and he intimates that the atrium was so called from the name Atria of a Tuscan town; but SERVIUS asserts that the kitchen was originally placed therein, and that it was called *atrium quasi atrum*, on account of the soot from the smoke. CATO states that before his time, (B.C. 234-149) the Romans were accustomed to sleep in the atrium with the (house) door open. VITRUVIUS confirms the opinion of VARRO: in vi, 3, he describes five sorts of *cavædia*, one of which is called Tuscanicum; in vi, 4, he makes the TABLINUM, ALÆ, and FAUCES essential to an atrium properly so called; he does not merit the charge of confounding his technical terms in vi, 3, as the word atrium should there be understood as implying a complete atrium; . . . for in vi, 8, he mentions that vestibules, *cavædia*, and peristyles, were sufficient for a man of moderate fortune, as such a person did not require magnificent vestibules, *atria*, and tablina; and that in the country the peristyles were usually between the atrium and the entrance door, while in the city, the atrium was placed between the peristyle and the entrance."—*Dict. of Arch.*, Arch. Pub. Soc., Lond.





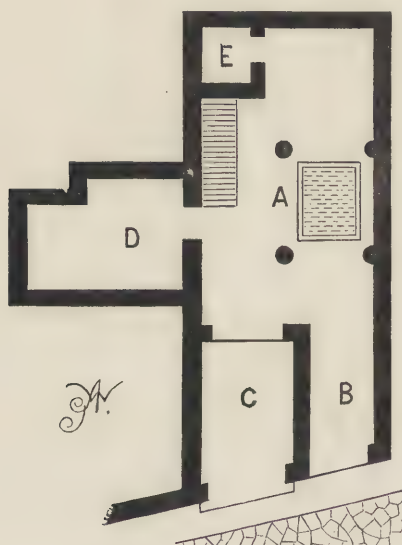
integral parts of the atrium proper, but there seems to be no good reason to specially connect them therewith so that they shall be understood by the single term atrium. With the *alae* the case is different, for they appear not to have been in any way shut off from the atrium, but rather to have formed important adjuncts. The term used to designate them implies that they are wings to a main feature, and, accordingly, not independent apartments.

In the centre of the floor of the atrium a portion was sunk for the reception of rain water; this was termed the *impluvium*; and above it an opening of similar dimensions was left in the ceiling or roof, termed the *compluvium*. Vitruvius directs that these are not to be less than one-fourth or more than one-third the width of the floor, and that their length shall be in proportion to that of the atrium. In Fig. 1 is given the plan of an atrium, with its adjuncts and surroundings, according to the directions of Vitruvius, supplemented with suggestions derived from the houses of Pompeii. A is the main portion of the atrium, measuring 60 feet by 40 feet, with its *impluvium*, B, in the centre. At CC are the *alae*, one-fourth the length of the atrium proper or *cavaedium*. D is the *tablinum*, one-half the width of the *cavaedium*; E is the *fauces*, leading to the *peristylum* G; F is the *vestibulum*, through which the atrium is approached from the entrance door; K is the porter's room, with a small window looking into the street, and a door from the *vestibulum*. H is the *atriensium*, or small room appropriated to the *atriensis* or slave who has charge of the atrium. The several apartments, I, M, are the *cubicula* or *dormitoria*, and those used by the family, termed *exedrae* and *oeci*. M might also be used as the *diaeta*, or the apartment in which the family dined when alone. N is the *trinclinium* or chief dining room of the house, open to the *peristylum*. This arrangement of the atrium may be accepted as the normal one according to Vitruvius; we shall presently see how far it was departed from in actual examples of different dimensions.

*Cavaedia* were designated by several names according to the manner in which they were roofed. Vitruvius gives (Book vi, cap. 3) five different species:—1. The *cavaedium Tuscanicum*, in which the roof was supported on two beams laid across the breadth of the court, with trimmers from one to the other, leaving the central opening or *compluvium*, and having four valleys from the angles of the walls to the angles of the *compluvium*. In this form the rain water fell from the four sloping roofs into the *impluvium* in the floor below. 2. The *Corinthium*, in which the beams forming the *compluvium*, and on which the sloping roofs rested, were supported on columns at their angles and at intervals along their lengths. The rain, as in the previous case, dripped into the *impluvium*. 3. The *tetrastylon*, in which four columns only were used, placed under the junctions of the beams at the angles of the *compluvium*. In this, as in the previous varieties, the rain from the sloping roofs dripped into the *impluvium*. 4. The *displuviatum*, in which the slopes of the roof were reversed, falling from the *compluvium* to the walls of the *cavaedium*,

where gutters were constructed to convey the water into a tank under the impluvium. In this construction the sides of the compluvium had to be carried up considerably to give the necessary fall to the roof. An impluvium was formed in the floor to receive whatever rain fell through the compluvium. 5. The testudinatum, in which there was no compluvium; the roof, or floor where apartments were constructed over it, extending from wall to wall. The mode of lighting this variety of cavaedium has not been described; and no example has been found at Pompeii in which the treatment can be traced.

The atrium was unquestionably the most important portion of a Roman house; and in the humbler class of dwelling was used as a sitting room, dining room, and kitchen,\* and, indeed, for all the daily duties of the

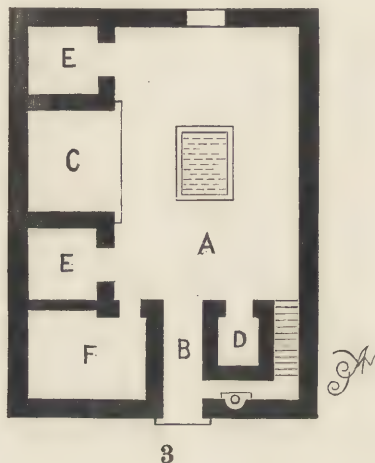


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family. Fig. 2 is a plan of one of the small houses discovered at Pompeii; it will be seen to consist of an atrium roofed on three sides only, a vestibule from the street, a small shop, a bedroom or cubiculum, and a small corner closet, with an apartment over it, reached by stairs. Here the atrium must have been used for all purposes save as a bedroom. In Fig. 3, the plan of another of the smaller houses, we find the atrium still the chief feature; it is roofed in the Tuscan manner, and has its impluvium in the central position. This house is much more important than the preceding, and, although no *alae* appear, it has the *tablinum* (probably in this case also used as a *trincinium*) opening from the centre of one of the sides of

\* "In the Atrium anciently the family used to sup, *Serv. in Virg. Æn. i.*, 726, *iii.*, 353, where likewise was the kitchen (*CULINA*), *Ibid.*" Adam—*Roman Antiquities*. Lond., 1807.

the atrium. Four other apartments open from the atrium, three of which were cubicula, while the largest was probably an exedra or room for conversation and amusement. In both the above examples we find the atrium, or what might be more correctly termed the cavaedium, in its primitive form; assuming more importance, however, in relation to the remaining apartments of the house, than it did in its perfect development in the mansions of the wealthy.



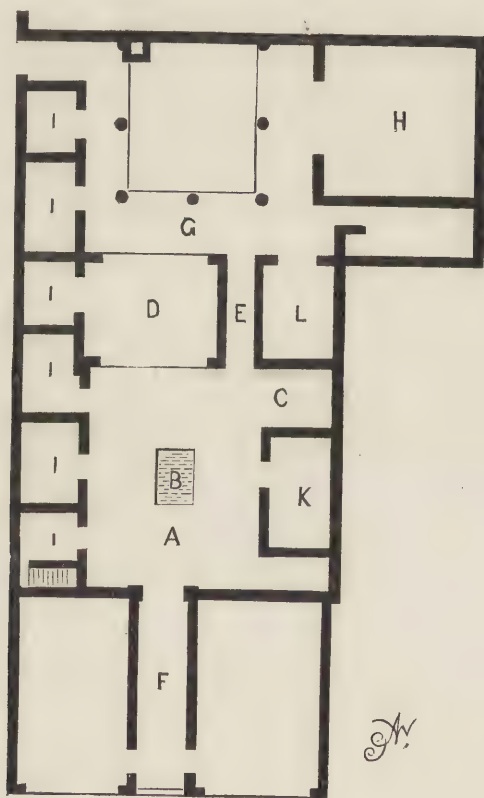
In large dwelling houses, the atrium was used as a reception-room. In it the nobles gave audience to their morning visitors, who called to pay their homage or to solicit favours; and in it wealthy patrons received their clients and men of business. In marriage ceremonies the nuptial couch was placed in the atrium opposite the entrance vestibule. The atrium was in certain cases held as a sort of asylum or sanctuary; an ancient law prescribed that if a man in fetters could contrive to enter the atrium of the house of the Flamen dialis, his fetters should be struck off and thrown through the compluvium into the street. The atrium was, in wealthy establishments, magnificently furnished and decorated with hangings, paintings, and sculptured portraits of ancestors and images of deities, and ornamental articles in bronze and the precious metals.\* Here was also placed the sacred focus or hearth, dedicated to the Lares of the family, and in it a fire was kept burning, the fumes and smoke of which escaped through the compluvium.

\* "In the *Atrium*, the nobility placed the images of their ancestors, the clients used to wait on their patrons, *Horat. ep. i. 5. 31. Juvenal. vii. 71.*, and receive the *sportula*." (A gift of meat or money.)

"The *Atrium* was also adorned with pictures, statues, plate, &c., and the place where these were kept was called *pinathea*, *Plin. xxxv. 2. Petron. 29. 83.* In later times, the *atrium* seems to have been divided into different parts, separated from one another by hangings or veils (*vela*); into which persons were admitted, according to their different degrees of favour." *Adam—Roman Antiquities.*



Fig. 4 is the plan of the house in Pompeii, commonly designated the "house of the Tragic Poet." In this example we are approaching nearer to the atrium of Vitruvius, for in it are to be seen all the adjuncts which he describes, with the exception of the two *alae*, one only of which is here introduced. The *cavaedium* A, with its impluvium B, the *ala* C, the *tablinum* D, the *fauces* E, and the *vestibulum* F, are all in their proper relative positions. The *peristylum* G, the *trinclinium* H, the *oecus* L, the *exedra* K, and the *cubacula*, etc., I, complete the accommodation of this house; exclusive, however, of the kitchen, adjoining the *trinclinium*, and the apartments used by the slaves, situated on an upper floor, the stairs to which are shown. The two front apartments appear to have been shops, probably belonging to the owner of the establishment.



4

One of the most interesting dwellings discovered at Pompeii, is that known as the "house of Pansa," the plan of which is given in our article *House*. Here the arrangement of the atrium is almost identical with that of Vitruvius, and is symmetrical in all its features. The atrium was evidently roofed in the Tuscan manner, with a small compluvium in the centre. The *alae* are about one-fourth the length of the *cavaedium*, the

remaining three-fourths, on each side, being divided into three chambers, probably cubicula. The tablinum is about half the width of the cavaedium; and the fauces is situated on the right of the tablinum. All the arrangements are similar to those shown in the Vitruvian atrium, Fig. 1.

In all the previously-mentioned dwelling houses there has been only one atrium; but in that we are now about to describe, there are two, of different dimensions. The larger one is the atrium proper; the smaller may be correctly designated the atriolium, that is, the lesser atrium. This house, which is remarkable in many respects, and presents an unique plan, is called "the house of the Dioscuri," or Castor and Pollux, from the paintings representing those personages which were found on its vestibule walls.

The description of this dwelling is given in article *House*, so we may in this place confine our remarks to its atria and their adjuncts.

On reference to the plan, Fig. 5, it will be observed that the atrium A and the atriolium O, are divided by a large court surrounded by a portico



M. The atrium is entered through the vestibulum B; it is almost square in plan, measuring about forty feet each way, with a compluvium and impluvium C about seventeen feet square. The roof was supported, in the manner of the cavaedium Corinthium, by twelve Doric columns, one foot eight inches in diameter, and about twelve feet in height. These columns, as usual in the domestic architecture of Pompeii, were left plain up to about half their height, and coloured red; the upper part being fluted, and painted some delicate tint approaching white. As Gell

remarks :—"This custom seems to have been adopted on account of the injury to which the delicate fluting of the Doric order was liable, and the difficulty of preserving, in places of frequent passage, the cleanly appearance of the lower part of the columns."

Speaking of the compluvium, and further in description of this atrium, Gell continues :—"The hypæthrum in this case served as a compluvium, receiving the water which fell from the roof, and transmitting it to a reservoir below, to which there is a marble mouth, or puteale, exhibiting the traces of long use in the furrows worn by the ropes by which the water was drawn up. This is paved with a certain degree of symmetry, and is only of the usual depth of a few inches, so that, when dry, the inhabitants might walk across it in any direction. When, on the contrary, the fountain threw up water in the centre from a brazen tube, with a cock to stop it at pleasure, the reflection of the blue sky above, with the architecture and the statue on the brink, must have produced a scene almost of enchantment, and have lighted up most agreeably, with tremulous rays, the varied walls and lacunaria of this splendid abode. The whole must have always presented the appearance of a palace destined to the purposes of a fête or an assembly, as indeed must the generality of the larger habitations of Pompeii. The fountain issued from a sort of flower in marble, on which frogs and lizards are seen disporting.

"This division of the building may answer to the Corinthian atrium of Vitruvius. It was paved with the usual opus signinum. The lower portion, or surbase, of the walls, was painted, as in other houses, with flowers and birds."

In this atrium there is only one ala D, unless the portion L, which leads to the great court M, may be considered to be the second one. The ala D is furnished with a seat extending round its three sides. Close to the entrance of this ala are shown two projecting blocks; these represent bases formed of brickwork and marble, upon which were placed the treasure-chests of the proprietor. The chests were formed of an external casing of iron on a construction of wood lined with brass. The handles, locks, and ornamental features on the ironwork were of bronze.\*

The tablinum E and the fauces F open as usual from the end of the cavaedium, and extend to the peristylum K. G is a smaller trinclinium or diaeta, and H are cubicula, the smaller of which are the dormitoria. Opening from the vestibulum is the porter's room I, from which wooden stairs gave access to a sleeping apartment over. J is the atriensium, in which a portion of the floor is elevated a few inches to receive a bed.

We now come to the lesser atrium or atriolium. This consists of a cavaedium Tuscanicum O, approached from the street through the vestibulum P. It has no alae; but a small tablinum Q, with a single opening to the cavaedium, and a fauces U, leading to an inner court W, occupy the usual positions. R is an atriensium, S the culina or kitchen,

\* For a full description of these coffers see *Pompeiana*, by Sir William Gell, vol. ii., p. 30.



T are cubicula, and V is the triclinium of this subordinate department of the mansion. N is the state triclinium opening from the great court M.

On referring to our article *House*, the student will find the plan of another Pompeian mansion, known as the "house of the Faun." This has also an atrium, with alae, tablinum, and cubicula, but without the fauces; and an atriolium without alae properly so called, but with a fauces leading into a large court or cavaedium Corinthium. Another fauces from this leads to a magnificent peristylum beyond.

From the plans and remarks above given the student will readily gather all facts of value to him relative to the ancient atrium, and we have now to direct his attention to the atrium as it appears in Christian architecture.

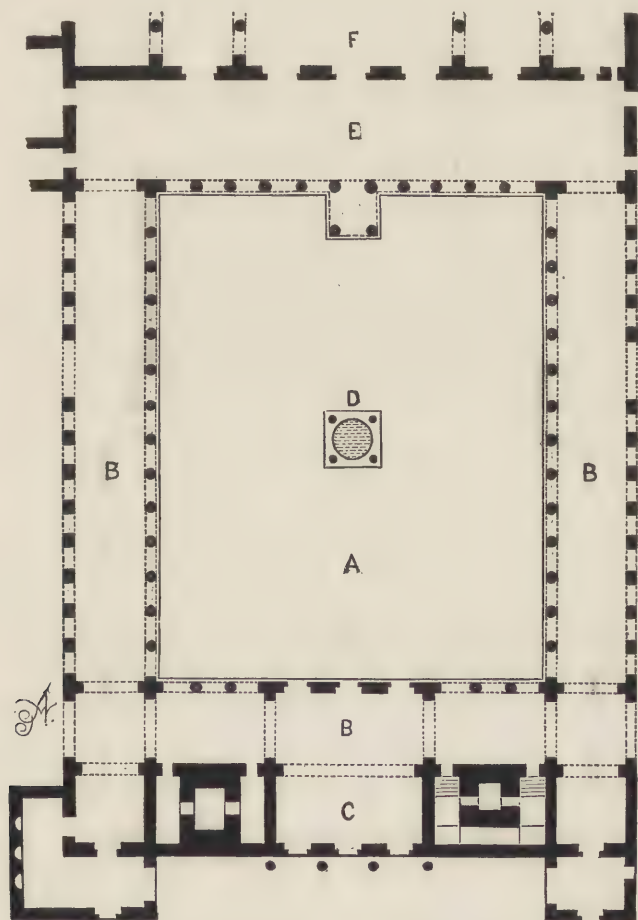
We have reason to believe that the generality of the early Christian basilicæ and churches, certainly all the more important ones, had an enclosed court before their principal entrances. This court was furnished with an internal portico extending round its three sides, and terminating against and opening into the portico or narthex of the church. The central space was left open to the sky, and had in its centre a basin and fountain. The gateway to the court was generally in the centre of the external wall, directly opposite the façade of the church. From the similarity between this enclosed area and the public atrium, or that sometimes erected in front of Roman temples, it was designated by the same name on its adoption in Christian architecture.

The first important example of which there is any record, is that of the great basilica of St. Peter, at Rome, constructed by Constantine (about A.D. 330). Drawings of this important building were fortunately made previous to its destruction to make room for the present cathedral of St. Peter, and from these we can see the great importance given to the atrium by the early church builders. A plan of it is given in Fig. 6.

This importance was no doubt owing to the requirements of the discipline of the primitive Church, according to which, accommodation had to be provided for the numerous converts or penitents who were not yet baptised and admitted within the sacred building. Those further advanced in the Faith, and preparing for baptism, were allowed to leave the atrium and enter the narthex or pronaos. The baptistery was sometimes attached to the atrium, as in the cathedrals of Parenzo and Novara.

On reference to the plan Fig. 6, it will be observed that the atrium A was of great size, and, in addition to its being surrounded by a spacious portico B, had a range of important buildings C erected in front, from which rose two bell-towers. In the centre of the open area was placed the fountain D, at which the faithful made their ablutions before entering the narthex E. Five doors from the narthex gave entrance to the nave and aisles of the basilica F. From the drawings made of this atrium, it appears that it was practically open on its sides, having four large archways, and accordingly more public than the later examples were allowed to be.

The ancient basilica of St. Paolo fuori delle Mura had originally a spacious atrium, the portico of which consisted of an arcade, with Corinthian columns, covered with a wooden roof. This basilica, which had been subjected to many alterations, was almost totally destroyed by fire in the year 1823.

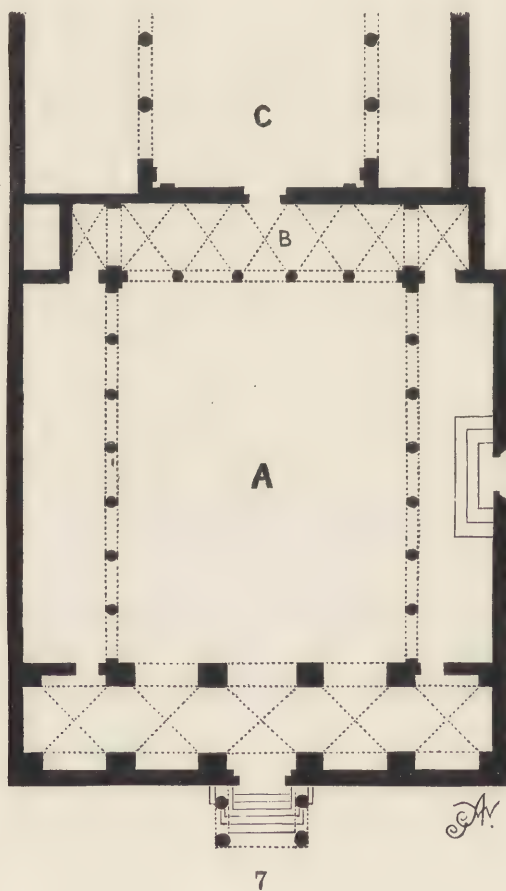


A spacious atrium was erected in front of the church of St. Sophia, at Constantinople; described by Eusebius (*Hist.*, x., 4) as magnificent. Whether this atrium formed part of Justinian's design, or was added at a later date is not known; but it is hardly likely that so important a church would have been erected at the time (527-565) without so necessary an adjunct. The generally accepted opinion is that the atrium was erected after Justinian's time. (See plan of St. Sophia in *Byzantine Architecture*.)

It appears from certain early writers, including the celebrated Leo Allatius, that some description of enclosure, erected before the entrance doors; and furnished with a shelter against rain, was a recognised portion of a Byzantine church. This enclosure, though designated by different names, was doubtless simply a modified form of the Latin atrium.\*

There are several atria in existence or traceable from their remains; amongst the former the most perfect and noteworthy are those of the basilica of St. Clemente, at Rome, and St. Ambrogio, at Milan.

The atrium of St. Clemente, a plan of which is given in Fig. 7, was reconstructed by Adrian I. in the end of the eighth century, in the style



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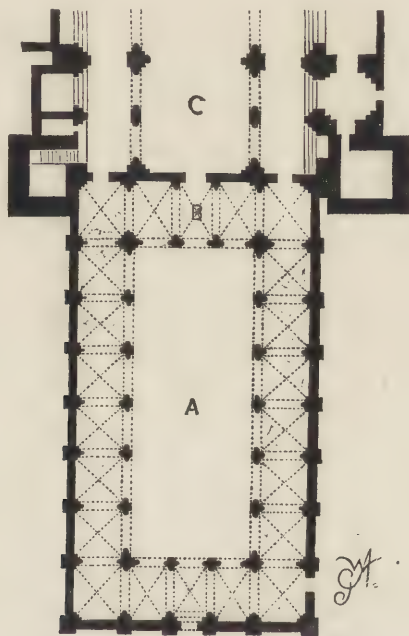
of the original atrium of the fifth century. It consists of the usual enclosed area with the portico on its three sides, abutting against the

\* In the valuable work, *Byzantine Architecture*, by Charles Texier and R. P. Pullan, we find the following passages:—"The church was entered through a square court (*atrium*), in which was the fountain for ablution: for all Christians were recommended to perform



narthex of the basilica. The atrium A is wider than the nave and aisles of the basilica C and the narthex B. On two sides the portico is constructed of antique columns of the Ionic order, supporting an entablature; on that opposite the narthex it is in the form of a massive vaulted vestibule, with a projecting porch to the street.

The atrium of St. Ambrogio\* is more uniform in its design than that just described. It will be seen, on reference to the plan Fig. 8, that it



8

consists of an elongated court A, surrounded with a vaulted portico,

an ablution before prayers. There is still to be seen an inscription in the church of St. Sophia, at Constantinople, which proves this to have been the usage:—

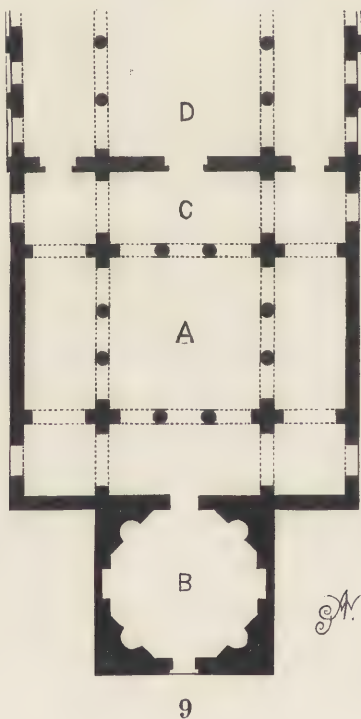
ΝΙΨΟΝΑΝΟΜΗΜΑΤΑΗΜΟΝΑΝΟΨΙΝ (Not only cleanse thy body, but wash away thy sins).

This custom of making the purity of the body symbolical of the purity of the soul was the reason why baths were erected in the vicinity of most churches. . . . Before the door of the church is a sort of vestibule, or sheltered spot, called the *impluvium*. The patriarch Sophronius mentions this vestibule in his Life of St. Mary the Egyptian. Codinus (ch. xviii.) gives it the name of *propylæum*; Zonaras that of *aula* (αὐλή). All these expressions signify a sort of *impluvium*, *atrium*, or *mesaulion*. We read in Cedrenus: 'In the year thirty-seven of Justinian a fire destroyed the centre of the *impluvium* of the great church that is called the *Garconostasis*; and in the fourteenth year of Mauricius, that emperor made the solar hall round the palace of Magnaura, and he placed his statue in the centre of the *impluvium*.'

\* There is a difference of opinion among archæologists as to the date of this atrium; some pronouncing it to be the work of Archbishop Ansbertus (868-882), whilst others attribute it to the twelfth century.

similar in general treatment to the narthex of the church B. The portico consists of an arcade of semicircular arches in two orders, formed of brick with occasionally a stone voussoir introduced, supported on columns which are trefoil in section, with the addition of a flat pilaster on their outer faces. The bases of the columns are of the usual Attic character, resting on square plinths, and have angle ornaments. The capitals are carved with strap-work, knots, and animals. The vaulting is of brick. Small attached shafts are carried through the spandrels of the arches, rising from the capitals of the pilasters up to the ornamental cornice which runs round the portico, a few courses above the crown of the arches. Speaking of this atrium, Mr. Fergusson justly remarks :—"The atrium is a singularly pleasing adjunct to the façade, removing the church back from the noisy world outside, and by its quiet seclusion tending to produce that devotional feeling so suitable to the entrance of a church."\*

Attached to the cathedral of Parenzo, in Istria, is another very interesting example of the early Christian atrium. This building is believed to



have been founded in the end of the sixth or the commencement of the seventh century by the first bishop of Parenzo. The atrium is square in plan (A, Fig. 9), with a portico entirely surrounding it, formed of three semicircular arches on each side, supported on circular columns with

\* *Handbook of Architecture*, where an interior view of this atrium is given, p. 540.

richly carved capitals. A view of the interior of this perfect example is given in Fig. 10. The portion of the portico C, next the basilica, is the narthex. We meet here with a feature which has not existed in any of the previously described atria; this is the baptistery B, an octagonal chamber opening from the western portion of the portico. Its introduction



10

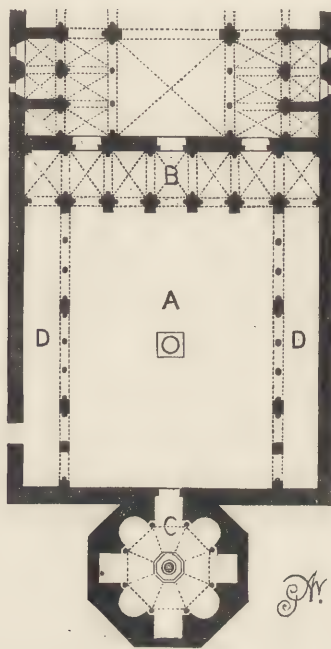
in this attached and symmetrical position seems most appropriate, and gives a singularly complete character to the plan of this interesting cathedral.\* The baptistery is a lofty building, carried up as an octagon externally above the height of the atrium, and lighted with eight round-arched windows. The portico of the atrium is covered with a simply constructed wooden roof.

We now come to the last and latest example our space will permit us to allude to, the atrium of the cathedral of Novara, erected during the eleventh century, apparently against the baptistery, which is of an earlier date than the rest of the cathedral. It will be seen, on reference to the plan Fig. 11; that the atrium A is a square area with narrow arcaded porticos on its two sides only, that opposite the narthex B being left a

\* An entire plan of this building is given in article *Basilica*.



plain wall pierced in its centre with the entrance to the octagonal baptistery C, which is very similar in plan to that of the cathedral of Parenzo. The lateral porticos D D are low and insignificant in comparison with the narthex, and have all the appearance of being an after-thought. They



11

are roofed with timber at the height of the springers of the narthex arches.

Remains of atria are found in connexion with the following buildings :—The ancient basilica of St. Giovanni Evangelista, at Ravenna ; St. Martino ai Monti, and S S. Quattro Coronati, at Rome ; and St. Lorenzo, at Milan.

A beautiful Transition atrium, of no ritual significance however, projects from the west end of the abbey church of Laach\* ; and a still later atrium, also of no ritual use, is to be found attached to the church of St Maria presso San Celso, at Milan.

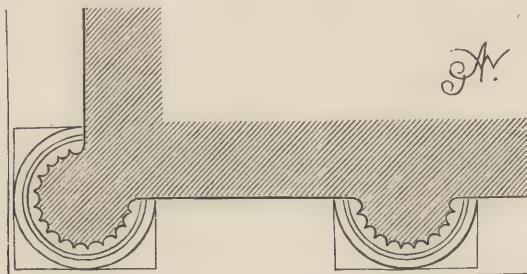
**ATTACHED COLUMNS.** The term commonly applied to columns which are placed in front of a wall or angle and attached or engaged thereto.

Attached or engaged columns do not appear to have been frequently used by the Greek architects ; yet important instances of their adoption are

\* Two bays of this atrium are indicated on the plan of the church in article *Apse*, Fig. 23.

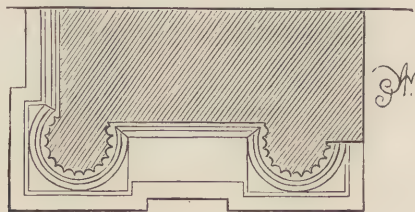
presented in the Choragic Monument of Lysicrates and the Erechtheium, at Athens. In the former, the six Corinthian columns projected from the face of the circular wall half their diameter. In the latter, the Ionic columns of the western façade projected from the flat wall rather more than half their diameter; their capitals terminating abruptly against the wall, and their bases being connected together by the mouldings being carried along the wall from one to another.

In Roman architecture, attached columns were very often introduced, especially in arcaded structures like the Colosseum and other amphi-



1

theatres, and in arches of triumph, as those of Titus, at Rome, and Trajan, at Ancona. In such constructions the intercolumniations are not restricted, depending solely on the width of the arches, windows, niches or other features placed between them. The Roman architects used attached columns on the sides and ends of certain temples, the intercolumniations being the same as in the porticos. An example of this treatment is presented by the tetrastyle prostyle temple of Fortuna Virilis, at Rome. An angle column and one side column of the cell of this building are shown in Fig. 1; and a complete plan of the temple is given in article *Prostyle*. The attached columns project half their diameter; and the angle columns display three-quarters of their circumference so as to range with both the side and end columns.



2

In arcaded structures, the projections of the columns from the wall-face are as a rule dictated by those of the imposts or plat-bands of the arches. On this subject Sir William Chambers remarks:—"When columns are

engaged in the piers" (of arcades), "their projection depends on that of the impost, of which the most prominent part should be in a line with the axis of the column, at least in the Tuscan and Doric orders; but in the Ionic, Composite, and Corinthian, it may project somewhat beyond the axis, as in the Redentore, at Venice, one of Palladio's best works, because, when the columns in these orders are disengaged much above the half of their diameter, it occasions very disagreeable mutilations in the capitals, as may be observed in the porch of St. George's, Bloomsbury, and at the Banqueting-House, Whitehall."<sup>1</sup> The ancients, if we may judge from examples of their works preserved to us, do not appear to have had any fixed rules for the projection of attached columns. On examining the arch of Trajan, at Ancona, a half-plan of one of the piers of which is given in Fig. 2, we find three different projections adopted, two of which must cause the disagreeable mutilations of the Corinthian capitals spoken of above.

**ATTIC.** (*Gr.* Ἀττικός.) In art nomenclature, that which appertains to the ancient Athenians.<sup>2</sup> In architecture, the term is employed to designate that portion of a façade of a building constructed above the entablature of the principal order. The term appears to have been introduced by the architects of the seventeenth century, with the intention of conveying the idea that the feature to which it alluded was constructed or designed in the Athenian manner. All that is claimed for the attic in this respect, however, is that it hides the roof, and accordingly gives the appearance of a flat covering, such as the dwelling houses of Athens are understood to have had in common with those of other eastern cities.

The attic is a sort of dwarf story, rising from the entablature, and sometimes ornamented with pedestal-like projections, pilasters, or panels, in addition to its usual plinth and cornice.

Only one example is known in Grecian architecture, that of the Choragic monument of Thrasyllus;<sup>3</sup> an elevation of one of the wings or end divisions of which is given in the accompanying illustration, A, Fig. 1.

<sup>1</sup> *A Treatise on the Decorative Part of Civil Architecture*, by Sir W. Chambers. Gwilt's edition. Lond., 1825.

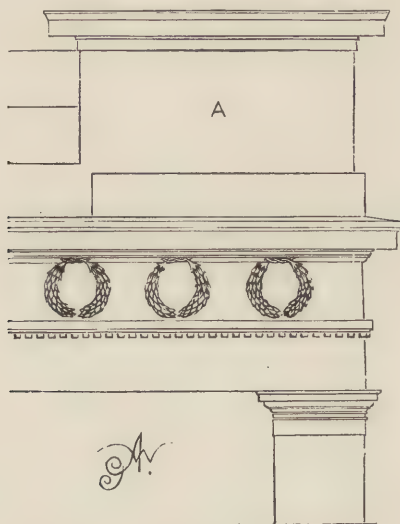
<sup>2</sup> "ATTIQUE.—Qui appartient à Athènes, style attique, goût attique, synonyme de style grec."—E. Bosc., *Dict. Rais. d'Arch.*

<sup>3</sup> "A singular building, which dates a century lower than the Periclean age, and exhibits much that is impressive and well adapted to the purposes of the architect and sculptor. The lower portion of the edifice has evidently been considered as strictly subordinate to the entablature and attic; and these have been disposed with specific regard to the great feature of the entire arrangement, the noble statue which occupied the centre of the crowning platform.

"The whole structure forms an architectural front to a cave of small extent, now dedicated as a chapel to Our Lady of the Grotto, Panaghia Speliotissa. This cavern stood immediately above the Dionysiac Theatre, and now serves as an important indication of the site of that celebrated scene of Choragic competition. The design consists of an attic, broken in the centre by steps leading to the platform; the two wings or flanking members, thus formed, present the



The attic was frequently introduced by the Roman architects in their arches of triumph, and certain other public buildings. Those which surmounted the entablatures of the arches were usually massive and lofty, as in the arches of Titus, Septimius Severus, Trajan, and Constantine. The attic of the arch of Septimius Severus measures in height about two-thirds of the height of the columns; and consists of a die, with moulded plinth and cornice, having simple projecting features or false pedestals over the end columns, with a sunk panel between them, con-



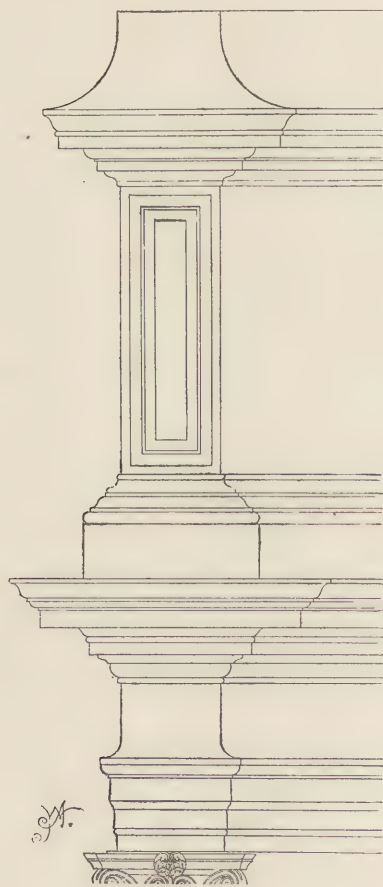
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taining a bold inscription, stating that the arch was erected in honour of the emperor Septimius Severus, by the Senate and Roman People, for his victories in the East. The attic of the arch of Trajan, at Ancona, measures about one-half the height of the columns. It has a richly moulded plinth and cornice of considerable projection, as shown in Fig. 2. It has projecting angle features; and the portion over the archway is also projected, and is panelled and inscribed. The arch of Constantine, at Rome, carries a richly-sculptured and inscribed attic about two-thirds the height of the columns. A drawing of this beautiful arch is given in article *Triumphal Arch*.

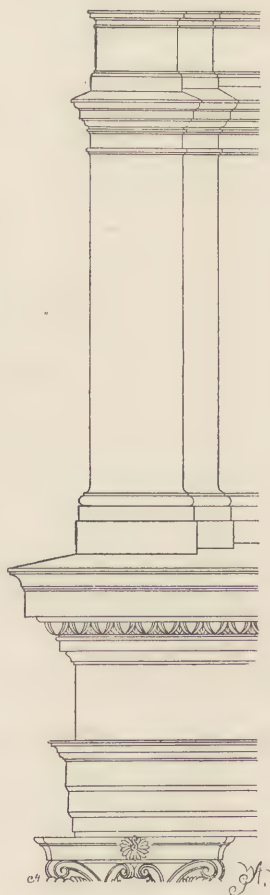
A massive attic, about three-eighths the height of the columns, surmounted the entablature of the peribolus wall of the forum of Nerva, at

appearance of a pedestal, or stylobate, with cornice, die, and plinth. This superstructure rests upon an entablature supported by two antæ, and a central pillar or pier, quadrangular like the antæ, but differing from them in its proportions, and in the profile of its mouldings. The first view of all this suggests the idea of irregularity, and makes it probable that there has been some alteration of the original design: this probability is strengthened by the fact that the attic is made of a different marble from the pure Pentelic of the entablature and its supports."—Stuart and Revett. *The Antiquities of Athens*, 8vo. Lond., 1876.

Rome. Its plinth was moulded and its cornice most elaborately wrought with sculptured enrichment. In this example, as in those previously mentioned, portions of the attic were projected from the general surface directly over the columns; these projections had the plinth and cornice breaking round them, giving them the appearance of attached pedestals or dwarf pilasters, but neither of these names can be correctly applied to them. Probably the best term for such features would be *false pedestals*; they are pedestals in appearance only. (See Fig. 2.)



2



3

It is in modern architecture alone that the attic is found in what may be looked upon as its full development, forming a complete story, decorated with projecting features and panels, and pierced with windows, as in certain of the Palladian buildings of Vicenza. In some examples, such as those of the Tiene and Barbarano palaces, statues were placed over the projections, making them, strictly speaking, attached pedestals. A lofty attic of a

similar description surmounts the entablature of the order of the cathedral of St. Peter, at Rome. A drawing of this attic is given (Fig. 3), as the most important example of the modern development, showing its proportion to the entablature. The attic is thirty-nine feet high; and the order, from the base of the column to the top of the entablature, is one hundred and eight feet. A balustrade terminates the attic; and niches and windows ornamentally treated relieve the wall spaces between the projections.

In conclusion, we may appropriately give Sir William Chambers' remarks on the attic in modern architecture:—"It is sometimes usual, instead of a second order, to crown the first with an attic, as Palladio has done at the Porto and Valmarana palaces, in Vicenza, and Inigo Jones, at Greenwich Hospital. These attics should never exceed in height one-third of the height of the order on which they are placed; nor ever be less than one-quarter. Their figure is that of a pedestal. The base, die, and cornice, of which they are composed, may bear the same proportions to each other as those of pedestals do, and the base and cornice may be composed of the same mouldings as those of pedestals are. Sometimes these attics are continued throughout without any breaks; at other times parts project, and form pilasters over each column or pilaster of the order. The breadth of these pilasters is seldom made narrower than the upper diameter of the column or pilaster under them, nor ever broader. Their projection may be equal to one-quarter of their breadth, or somewhat less, and their fronts are sometimes adorned with panels sunk in and surrounded with mouldings, as they were on the front of Powis-House; but this, on most occasions, as it looks too like joiner's work, should be avoided, as well as the capitals with which they are often adorned, particularly in France, because they then approach too near the figure of regular pilasters of the orders, and being much broader than these, in proportion to their height, always carry with them the idea of a stunted, clumsy, ill-proportioned composition."\*

A wall carried above a main cornice, for the purpose of hiding a sloping roof behind, and also probably with the view of giving an imposing height to the building, is usually designated by English architects a FALSE ATTIC. This, of course, has no windows or openings of any kind; but may be treated plainly with a simple plinth and cornice, or decorated with projections, panels, and any description of sculptured enrichments the taste of the architect may direct.

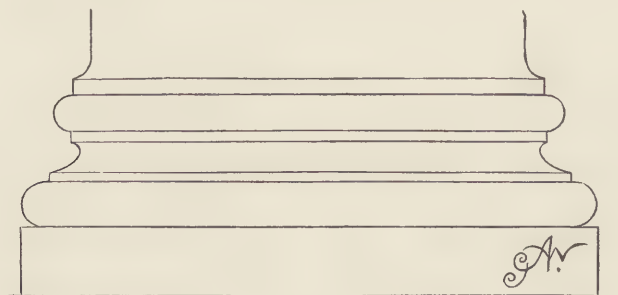
The term ATTIC is now very commonly applied to a room in the attic story of a dwelling-house. (See *Attic Story*.)

**ATTIC BASE.** The term applied, with the authority of Vitruvius, to a description of base for a column, formed of an upper and lower torus, divided by a scotia with its fillets, as in drawing, Fig. 1, from the Ionic order of the Colosseum, at Rome.

\* *A Treatise on the Decorative Part of Civil Architecture.* Gwilt's edition. Lond., 1825.

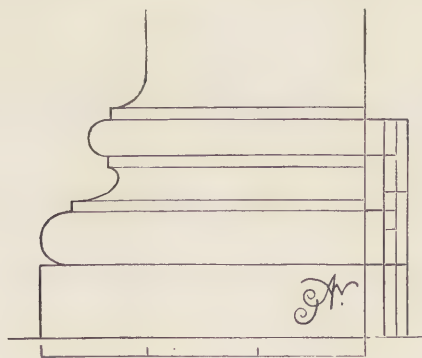


The directions given by Vitruvius, for the proportions of the base, are as follows :—" Their height being equal to the semi-diameter of the column including the plinth, and their projection one-quarter of the diameter of the column. If the *attic base* be used, it must be so subdivided that the upper part be one-third of the thickness of the column, and that the remainder be assigned for the height of the plinth. Excluding the plinth, divide the height into four parts " (see Fig. 2), "one of which is to be given to the upper torus ; then divide the remaining three parts into two



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equal parts, one will be the height of the lower torus, and the other the height of the scotia, with its fillets."\* Reference to the following diagram will make the above directions perfectly clear to the reader.



2

Of all the bases introduced by the ancient architects in their orders, none is at once so simple and beautiful as the attic ; from it nothing can be taken, and to it nothing requires to be added. The arrangement of its receding members, and the combination of its curves, produce a contour of perfect symmetry, full of repose and indicative of strength, elements essential to the beauty and fitness of the base of a column.

To what extent the Greeks used the attic base cannot be conjectured ;

\* Gwilt's translation of Vitruvius, Book iii., cap. 3.

the only example known to us is that of the order in the interior of the Propylæa, at Athens. In several of their other buildings, bases are introduced which differ very slightly from the true attic; the difference chiefly existing in the manner in which the upper torus is related to the scotia, the fillet of the latter being projected so as to touch or advance beyond a vertical line drawn at the extreme projection of the torus. Examples of this modified form of the attic base are presented by the Ionic order of the temple of Bacchus, at Teos; the Choragic monument of Lysicrates; the temple of Minerva Polias; and the tetrastyle portico of the Erechtheum, at Athens. In the two latter examples the upper torus is enriched. In Roman architecture, the attic base is more common; examples are presented by the Ionic order of the temple of Fortuna Virilis; the Corinthian order of the temple of Vesta, the Ionic order and the upper pilasters of the Colosseum; and the Composite order of the arch of Septimius Severus, all at Rome. The base of the order of the arch of Constantine, at Rome, is an attic, with the addition of an astragal between the upper torus and the fillet under the apophyge.

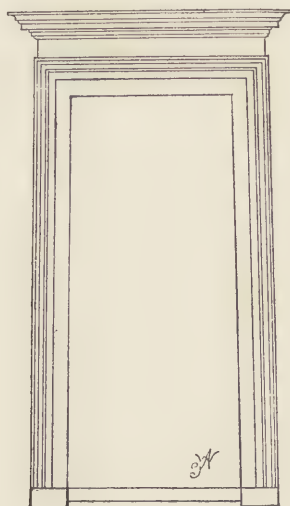
Modern architects have, with great judgment, shown their appreciation of the attic base by using it for all the orders to which such a base is admissible, namely, the Roman Doric, Ionic, Corinthian, and Composite. The student who desires to realise how perfectly the base accords with the other features and details of these orders should examine the plates given in Sir William Chambers' *Treatise on the Decorative Part of Civil Architecture*, where beautiful engravings of all are given.

**ATTIC COLUMN OR ATTIC ORDER.** According to Pliny, the term used by the Roman architects to designate a column whose shaft is square or quadrangular in section. This writer, after speaking of the four orders, Doric, Tuscan, Ionic, and Corinthian, adds:—"Præter has sunt quæ vocantur, Atticæ columnæ quaternis angulis pari laterum intervallo." There is one example of a quadrangular column which, at least, proves its adoption by the Athenian architects, and it is highly probable that it was first introduced by them; hence its name amongst the Romans. The example we allude to is the central column of the Choragic monument of Thrasylus, at Athens. (See foot-note, article *Attic*.)

The term **ATTIC ORDER** has been incorrectly used by modern architects to designate the pilaster-like projections, or false pedestals, which are found in the attics of the Roman arches of triumph (see *Attic*); and again, to the purely modern inventions, in the shape of stunted pilasters with bases and capitals, which are introduced as decorative features in attics.\*

\* "Nous ne voyons chez les Anciens l'ordre *attique* employé qu'en pilastres. Il se trouve aussi appliqué aux massifs qui servent de couronnement aux arcs de triomphe. Leurs chapiteaux ne consistent que dans les moulures de la corniche, qui profilent sur eux en saillie. D'où il résulteroit que cette espèce d'ordre n'auroit eu dans l'antique aucun caractère à lui propre et spécial, et qu'il auroit emprunté toujours celui des ordres avec lesquels il se seroit trouvé placé. Par la manière dont il se trouve employé, il paroîtroit n'avoir été

**ATTIC DOOR.** Vitruvius, in his chapter on the proportions of the doors of temples, describes three varieties, which he designates Doric, Ionic, and Attic. His directions for their designs are, however, rather



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indistinct, and especially those relating to the Attic form. That the student may form his own ideas on the subject, we here give the text bearing directly on it:—

“The Doric is constructed with these proportions. The top of the cornice, which is above the upper dressing, is to be level with the top of the capitals in the pronaos. The aperture of the door is determined as follows. The height from the pavement to the lacunaria is to be divided into three parts and a half, of which two constitute

regardé que comme un accessoire assez indifférent, et qui ne devoit jamais se concilier une attention particulière.

“Les modernes ont cherché à fixer le genre et les proportions de cet ordre; mais de tous leurs efforts à cet égard il n'est résulté qu'une plus grande incertitude sur sa nature, son emploi et son caractère. On n'a pu s'accorder même à déterminer sa proportion, relativement à l'ordre sur lequel il se trouve placé. Les uns lui donnent les deux tiers de l'ordre qui le soutient, les autres ne lui en donnent que la moitié. Pour son chapiteau, il semble qu'on soit d'accord d'une espèce de mélange d'ionique et de corinthien. L'on est aussi convenu qu'il doit avoir un rapport avec le genre d'architecture qui le reçoit. Chacun des ordres ayant sa proportion particulière, l'*attique* doit emprunter de chacun d'eux le caractère qui lui convient, sans avoir pour cela moins de cinq diamètres, ou six au plus. Il faut aussi qu'il se distingue par la richesse ou la simplicité, selon que l'exige la convenance du bâtiment.

“On enfonce quelquefois le pilastre d'une espèce de panneau formé par un cadre tout uni. D'autres fois ce cadre reçoit des ornemens; enfin il n'y a sur cet ordre aucune règle fixée, même par l'usage. On doit dire qu'il n'est autre chose qu'un assemblage arbitraire des différens ornemens de l'architecture, où les principes des ordres ne sont point employés, et dont l'ordonnance ne peut être réglée que par le goût de l'architecte.”—Quatremère de Quincy.  
—*Dict. Histor. d'Arch.*



the height of the doors. The height thus obtained is to be divided into twelve parts, of which five and a half are given to the width of the bottom part of the door. This is diminished towards the top, equal to one-third of the dressing, if the height be not more than sixteen feet. From sixteen feet to twenty-five the upper part of the opening is contracted one-fourth part of the dressing. From twenty-five to thirty feet the upper part is contracted one-eighth of the dressing. Those that are higher should have their sides vertical. The thickness of the dressings in front is to be equal to one-twelfth of the height of the door, and they are to diminish towards the top a fourteenth part of their width. The height of the architrave is to be equal to the upper part of the dressing. The cymatium is to be a sixth part of the dressing; its projection equal to its thickness. The cymatium is to be sculptured in the Lesbian form, with an astragal. Above the cymatium of the architrave of the dressing (supercilium), the frieze (hyperthyrum), is placed, and it is to have a Doric cymatium, with a Lesbian astragal, in low relief. Over this the corona is placed, unornamented, and with a cymatium. Its projection is to equal the height of the supercilium placed over the architrave of the dressing. On the right and left, projectures are made; and the cymatia of the dressings are connected by a mitre. . . . The Attic doors are made of the same proportions as the Doric, except that, in the dressings, the fasciæ return within the cymatium; and these are proportioned so that, exclusive of the cymatium, they are to be two-sevenths"—Book iv., cap. 6.

Several ancient buildings are mentioned by authors on architecture as presenting examples of the Attic door, though differing slightly in detail, such as a tomb at Agrigentum; the so-called temple of Hercules, at Cora; and the temple of Vesta, at Tivoli. A drawing of the doorway of the latter building is given in Fig. 1.

**ATTIC STORY.** The term used by English architects to designate a story of moderate height, situated above the more important stories of a dwelling house, and, as a rule, partly constructed in the roof. The term is derived from the feature in Classic architecture called an attic. (See *Attic*.) The rooms constructed in this story are commonly designated *Attics*; and the windows which light them are called *Attic Windows*.

**ATTICURGIC.** (Gr. ἀττικουργέας.) The term literally signifying in the *Athenian* or *Attic style*. The term is used by Vitruvius.

Attica embraced the country lying between Achaia and Macedonia, the chief city of which was Athens, and the city next in importance Eleusis. The road between them was designated "the sacred way." The former city was distinguished for all that was great in the arts, and the latter was celebrated for the superb temple of Ceres and Proserpine, which stood on a hill above the city, and in which the famous Eleusinian mysteries were carried out in all their sensual and fascinating details.

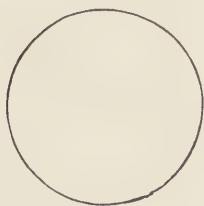
**ATTIRED.** The term used in heraldry, and applied to a stag or any animal of a similar kind when its horns are delineated of a different tincture to its head.

**ATTRIBUTES.** In art, objects or devices attributed to deities, celestial personages, or human beings, for the purpose of setting forth some

great events connected with their histories, or conveying to the mind their chief characteristics, qualities, ranks, or dignities. An attribute is, strictly speaking, neither a symbol nor an emblem of the personage invested with it. But an attribute may be both an attribute of a person and an emblem of something altogether distinct from, or in some way connected with, that person; or, in some few cases, it may be an attribute, a symbol, and an emblem. To make our meaning quite clear we shall give, in the present article, some illustrations of the combinations alluded to.

Of the pure attributes used in art, those which are given to express divinity or deification more or less perfect are of the first rank; these

are the nimbus and aureole. (See articles *Aureole* and *Nimbus*.) Neither the nimbus nor the aureole can be termed emblems or symbols, for they express nothing when used alone.



1

They are simply attributes, whether used in connexion with figures or portraitures, or applied to symbols to signify the divinity of the personages set forth by them. A plain disc, as Fig. 1, conveys no particular idea to the mind;\* but when we meet with it placed behind the head of a figure or symbol, as in Fig. 2,† it becomes an attribute expressive of divinity or deification, as attendant circumstances permit.

The illustration here given is probably one of the best we could have selected, as it comprises both general and special attributes, and also presents both a personage and a symbol, invested with attributes. The circular disc behind the head of the figure, which represents St. John the Baptist, is the *general attribute* of all the saints—the nimbus, expressive of divinity. The lamb with the cross and banner, which the saint carries in his arms, is the *special or individual attribute* of St. John



2

\* The circle has always been accepted as the emblem of eternity; and accordingly, under certain circumstances and with appropriate surroundings, such a figure as the above would be understood to allude to eternity.

† From a statue of St. John the Baptist, in the north porch of Chartres cathedral, illustrated in Didron's *Iconographie Chrétienne*, Paris, 1843,

the Baptist, given to him in allusion to his words, "Behold the Lamb of God which taketh away the sins of the world." (St. John, i. 29.) The lamb itself is the *symbol* of our Lord, and is placed in a circular aureole, the *special attribute* of the Deity, and expressive of supreme power or divine omnipotence. The lamb is also the *emblem* of extreme meekness and gentleness, but here its emblematical significance is absorbed in its superior symbolism. (See *Agnus Dei* and *Lamb*.)

In classic art, attributes were freely used in representations of the mythological personages, and in it we find the early use of the nimbus as the mark of divinity. A few of the best known attributes may be mentioned by way of illustration. The apple is the attribute of Aphrodite, in allusion to her triumph before Paris; it may also be considered the emblem of victorious beauty. (See article *Apple*, where its use in Christian art as an attribute and emblem is also spoken of.) The attributes of Ares are a spear and shield, as the god of war; those of Zeus are an eagle and a thunderbolt; Poseidon, a trident and products of the ocean; Hermes, a caduceus; Kronus, a harpe, or sickle, and a serpent with its tail in its mouth; Hélius, a chariot drawn by four horses, and a flambeau; Hephaestus, an anvil with a hammer and smith's tongs; Phœbus Apollo, a bow and a lyre; Eros, a bow and quiver; Hera, a pomegranate, the emblem of fecundity, and a sceptre with the representation of a cuckoo on its top; Eos, a chariot drawn by two or four horses; Seléna, the filling moon (as a crescent) and a burning torch; Pallas Athéna, a helmet and the aegis with the head of the Gorgon in its centre; Dionysus, a thyrsus and bunches of grapes; and Artemis, a hunting spear, a bow and quiver, and a dog.

In Christian art, besides those already mentioned, namely, the nimbus and aureole, numerous attributes are introduced. The persons of the Blessed Trinity, the choirs of angels, the evangelists, apostles, martyrs, the lesser saints, and all the blessed, bear attributes specially alluding to their divinity, dignities, ranks, offices, sufferings, rewards, and their celestial state. It is quite unnecessary, however, to particularly allude to them here, as they are fully treated in the numerous iconographic articles throughout our volumes, and in the article, *Saints, Attributes of*.

A complete knowledge of the numerous attributes introduced by middle age artists in their works of sculpture, painting, stained glass, and embroidery, is of the greatest value to the student of archæology and Christian iconography; and as the attributes are generally symbols, emblems, or insignia of something which renders them appropriate to the personages invested with them, their exact significance should be carefully arrived at.

**AUDIENCE CHAMBER.** The apartment in a palace in which a sovereign receives ambassadors, envoys, and ministers of state. In all cases this apartment is of such dimensions and richness as to accord with its importance and the use to which it is put; and further with the view



of sustaining the state and dignity of the sovereign who there gives audience.<sup>1</sup>

**AUDITORIUM.** (*Lat.*) The term signifying literally, a place in which persons congregated to listen to a speaker or reader. The term was also applied by the Romans to the mass of people assembled to hear a poet or orator. Under the empire the courts of justice were designated auditoria. "Under the republic the place for all judicial proceedings was the comitium and the forum. But for the sake of shelter and convenience it became the practice to hold courts in the Basilicae, which contained halls, which were also called auditoria. It is first under M. Aurelius that the auditorium principis is mentioned, by which we must understand a hall or room in the imperial residence; and in such a hall Septimius Severus and the later emperors held their regular sittings when they presided as judges."<sup>2</sup>

As might be expected, the word was handed down to later times, retaining its original significance; we find it applied by middle age writers to several portions of the churches or monastic buildings of their time. According to Ducange, it designated the place in the church where stood the hearers or converts who were yet unbaptised; or the place where the faithful heard the words of the speakers, the nave of a basilica or church.<sup>3</sup> The term was also applied to a house or room (parlour) in a monastic establishment, situated near the entrance to the church, in which guests were received on their arrival and saluted on their departure; and in which conversation, between the inmates and male or female visitors, was alone permitted.<sup>4</sup>

<sup>1</sup> "Among the most splendid of such rooms are the *Sala de los embaxadores* in the Alhambra; the *Sala dell' Udienza* in the Palazzo Vecchio at Florence; the bed-chamber of Louis XIV, with the *salle d'Apollon*, which served as the *salles d'audience*, and the Great Gallery, built by Le Brun at Versailles; the ministers and some chief magistrates abroad have also their audience chambers. In Spain, the *sala de audiencia* was a court of justice, in which the judges, from whom there was no appeal, decided upon all matters arising within their district; being in effect similar to the parliaments which existed in France until the end of the eighteenth century. The hall at Doctors' Commons is the audience chamber of the archbishop of Canterbury, who can there hold personally a court of audience; as the other English Metropolitan can at York."—*Dict. of Arch., Arch. Pub. Soc., Lond.*

<sup>2</sup> Dr. Smith. *Dict. of Greek and Roman Antiq.*

<sup>3</sup> AUDITORIUM, κατηκουμένιον, locus in Ecclesia, in quo consistebant Audientes, seu Catechumeni; vel locus, ubi fideles verba Concionatorum excipiebant, quomodo vox hæc usurpari videtur in Concilio Carthagin. IV. can. 24. *Sacerdote verbum faciente in Ecclesia, qui egressus de Auditorio fuerit, excommunicetur.* Charta Radulfi Delicati ex familia Comitum Vilcassini, in Tabul. S. Martini de Campis: *Eodem die, quo uxor sua Hazecha honore debito sepulta est apud S. Martinum in Auditorio ante Crucifixum.* Certe constat in ea Ecclesiae parte, quam hodie navim appellant."—Ducange. *Glossarium.*

<sup>4</sup> "AUDITORIUM, Domus, vel cubiculum in Monasteriis, ubi excipiebantur advenientes hospites, & salutaturi: *Salutatorium* [Gall. *Parloir.*] . . . . Ekeardus Junior de Casibus S. Galli. cap. 16. *Abbas autem post Laudes egressus, in Auditorio eum salutat.* Idem. cap. 10. *ad introitum Ecclesiae Auditorium statuit: Et cum ad introitum Ecclesiae, ubi locus Auditorii est, venissent.*" etc.—*Ibid.*

The Cistercians, Cluniacs, and others, used the term auditorium to designate the apartment where the monks met for conversation and in which they taught youths or listened to the teaching of their superiors. It was practically the lecture hall of the monastery. \*

In the present day, as well as in ancient times, the term has been appropriated to that portion of an odeum, theatre, lecture room, or hall for public assembly, occupied by the audience, as distinct from the stage, platform, or portion set apart for the actors, lecturers, or speakers.

**AUGMENTATION.** The term used in heraldry, to denote a special mark of honour granted to a subject by his sovereign. The augmentation is added to his coat of arms to record some noble action or important service in statesmanship or war.

**AUGUSTINE, ST.** Bishop, Confessor, and Doctor of the Church; the Patron Saint of Plombino, and Patron of theologians. This saint was born of humble parents in the episcopal city of Tagaste, in Numidia, in the year 354. His father, Patricius, was a pagan at the time of his birth, but was shortly afterwards converted by Monica, the saintly mother of Augustine (commemorated by the Latin Church on May 4th). Both his parents bestowed great care on his education, and he showed early promise of high accomplishments and the development of a fervid and powerful imagination—a promise which was amply fulfilled in his later life. After his home education was completed he was sent to Madaura, a town near Tagaste, to study grammar and rhetoric. At the age of fifteen he returned home, where he resided until his father had saved enough money to send him to finish his education at Carthage. During this time of inactivity at home he fell into dissipated and dissolute habits, to the intense grief of his religious mother; and on his arrival at Carthage he plunged into all sorts of sinful pleasures, and frequented all places of public amusement calculated to encourage his passions. He did not, however, neglect his studies, which from the first had fascinated him. The simplicity of the Holy Scriptures displeased him, and in his doubt and mental uncertainty he fell a prey to the Manichean heresy. At this time his saintly mother sorrowed deeply for the errors of her son, and refused to eat with him; but in a dream she was comforted with hopeful assurances, which reconciled her to him. She was further supported by the kind words of the bishop of Carthage, to whom she confided her troubles: "Go in peace, and God will bless thee; the son of thy many tears shall not be a castaway." After he had completed his studies at Carthage he returned as teacher of rhetoric

\* "AUDITORIUM præterea appellabant Cluniacenses & Cistercienses Monachi, & alii, Locum, in quo conveniebant Monachi, quod in eo essent Monachicæ Scholæ, ibique Præceptores docerent, discipuli audirent Magistros docentes. . . . Liber Usuum Cisterciensium, cap. 72. *In Auditorio non loquantur plures, quam duo simul cum Priore tempore lectionis, nisi forte Prior pro aliqua necessitate plures sibi convocandos judicaverit.* . . . Scholas publicas Auditorii appellatione donasse veteres notum est." etc.—Ibid.



to Tagaste, where he seems to have thrown over in his mind the Manichean heresy for academic philosophy, which taught universal disbelief in all systems of religion ; but he did not openly separate himself from the sect, for, after a short stay in Rome, he was appointed, through the interest of certain Manichean friends, to the chair of rhetoric at Milan (A.D. 384). This was the great turning point in his life ; for, under the eloquence of St. Ambrose, he again became a Christian, and was formally admitted by baptism into the Catholic Church on Holy Saturday, 387.

St. Augustine now devoted himself to the study of theology under St. Ambrose. In the year 389 he returned to his native town, where he formed a small confraternity devoted to prayer, fasting, and good works. This was the commencement of the famous order of Austin Friars. "After St. Augustine had spent about two years at Tagaste, he had occasion to go to Hippo. Valerius was then bishop; and as he was one day speaking to the people of the necessity of ordaining a priest for his church, they with one consent took St. Augustine, and presented him to the bishop, beseeching him to ordain him. Thus St. Augustine was admitted to holy orders early in A.D. 391. As he desired still to live in retirement, Valerius gave him a house and garden belonging to the church of Hippo, and there he assembled all those who aspired to serve God in celibacy and voluntary poverty. In A.D. 394, St. Augustine began to write against the Donatists. His fame having now overspread the whole of Africa, Valerius feared that he might be taken from Hippo to fill an episcopal see. He therefore wrote to the bishop of Carthage, entreating him to consecrate St. Augustine as his coadjutor in the diocese of Hippo. Aurelius gave his consent, and St. Augustine was consecrated at Christmas, A.D. 395. In the following year he became sole bishop on the death of Valerius. After his appointment to this high office, his manner of life was simple and unostentatious. He affected neither luxury nor extreme poverty ; and that the hospitality which became his office might not interrupt the religious seclusion of his monks he left their house, and went to live at the house of the bishop. There he established a community of the clergy under nearly the same Rule as his former institute. St. Augustine seems to have been at first doubtful whether this Rule should be made binding on all the clergy of his diocese ; afterwards he would ordain none who were not ready to conform to it, and those who renounced it were removed from the diocese. Such was the origin of the renowned Order of the Augustinian Canons.

"In A.D. 430 the Vandals laid siege to Hippo. St. Augustine and his clergy cried earnestly to God to deliver them from their hands. In the third month of the siege he was attacked by a violent fever, which ultimately caused his death, on August 28, in his seventy-seventh year. His body was laid in the church of St. Stephen, where it rested for nearly fifty years. When the African bishops were banished into Sardinia by Huneric, they carried it with them. About the year 710 Luitprand, King of the Lombards, purchased it from the Saracens, who were then masters



of Sardinia, for a large sum of money, and translated it with great honour to Pavia. It was solemnly carried into the church of St. Peter, in that city, on February 28th. This church was afterwards named in honour of St. Augustine, and is now served by Canons Regular and Hermits of his Order. His festival was observed at Carthage in the sixth age. It is a Holy Day of obligation in all the Spanish dominions." \*

A magnificent tomb was erected over his remains in the church of St. Peter; this was removed on the destruction of the church (1832), and re-erected in the cathedral of Pavia. It now stands in one of the chapels—a gem of art in a most unworthy casket. It bears the date of its construction, MCCCCLXII. It is a lofty design, executed in white marble, consisting of an elevated tomb, bearing the recumbent effigy of St. Augustine in his ecclesiastical vestments. Angels hold his pall as if in the act of folding it around him; and over him is an elaborate canopy, with numerous statues and pinnacles terminating it upwards. Statues of the Evangelists; Apostles, bearing the propositions of the Creed; figures of the Saints of his Order, the cardinal Virtues, and of Meekness and Chastity; and basso-relievos representing scenes from the life of St. Augustine, and the miracles performed through his intercession after his death, adorn the several parts of the structure, and impart an indescribable richness to its design. The work comprises no fewer than two hundred and ninety figures. There is some uncertainty as to the sculptors who executed it. Cicognara believes it to have been the work of Pietro Paolo and Jacobello delle Masegne; whilst Vasari attributes it to Agostino di Giovanni and Agnolo di Ventura. Bearing the date, however, in mind, the view of Cicognara is likely to be the more correct one. In the year 1362, the Sienese artists, Agostino and Agnolo, must have been aged men, and too infirm to enter upon so great an undertaking.

When represented in painting or sculpture, St. Augustine is usually vested in the full robes of a bishop of the Latin Church, and wears a mitre. His attributes are a flaming heart, a heart pierced with arrows, and a child with a shell or spoon. The burning or transfixed hearts express the ardour of his faith and love, and the poignancy of his repentance. The child is introduced in allusion to the Vision of St. Augustine. This vision is related by himself. "He tells us that while busied in writing his Discourse on the Trinity, he wandered along the sea-shore lost in meditation. Suddenly he beheld a child, who, having dug a hole in the sand, appeared to be bringing water from the sea to fill it. Augustine inquired what was the object of his task? He replied, that he intended to empty into this cavity all the waters of the great deep. 'Impossible!' exclaimed Augustine. 'Not more impossible,' replied the child, 'than for thee, O Augustine! to explain the mystery on which thou art now meditating.'" †

\* *Eng. Ch. Union Kal.*, 1864. Part ii., p. 81.

† *Sacred and Legendary Art*, vol. ii., p. 313.

In addition to these major attributes, St. Augustine occasionally carries a crosier, a book, and a pen. When represented as the founder of the Order of the Augustine Friars, he wears the black habit, and carries the rules of the Order, or is represented writing them. He has also been depicted with an eagle, the Old Testament symbol of the Divine Spirit.

There are twenty-nine churches dedicated to St. Augustine in England; how many of these refer to St. Augustine of Canterbury is not known, but it is highly probable that the larger proportion are dedicated to the English saint. In the Roman, French, Spanish, German, Old English, Sarum, and Scottish calendars his day is August 28th. He died at Hippo A.D. 430.

**AUGUSTINE, ST.** Archbishop of Canterbury and Confessor. Little is known of the life of St. Augustine previous to A.D. 596, in which year he was sent by St. Gregory the Great, as the leader of a small band of missionaries to Britain, to establish the papal supremacy there. In the year 597 the saint landed on the isle of Thanet; and shortly after succeeded in converting Ethelbert, king of Kent, and many of his subjects. He was assisted in his good work by Bertha, Ethelbert's queen, who had previously been converted to the Faith. Immediately after obtaining a firm footing in England he went over to France, where he received the Episcopal consecration and became "bishop of the English." On his return he fixed his see at Canterbury.

Representations of St. Augustine are now rare; but artists may be guided in their representations by the words of the Venerable Bede and Capgrave. The former says he was "the beloved of God," very probably meaning thereby that he was endowed with great personal graces as well as rich in mental gifts; the latter describes him as "very tall of stature, of a dark complexion, his face beautiful, but withal majestic." He may correctly be represented baptising Ethelbert, the first important act of his life in this country. He is depicted thus in Porter's *Lives of the Saints*.\*

There are twenty-nine churches in England dedicated to St. Augustine, the greater number of which are probably to St. Augustine of Canterbury, including the five which are in Kent, the field of his first labours. Some, however, are doubtless to the great Doctor of the Church, St. Augustine of Hippo. (See previous article.) In the old English, Sarum, and Scottish calendars his day is May 26th. He died A.D. 604.

**AULA OR AULE.** (*Gr.* αὐλή.) The term, in its original signification, was applied to the area or court-yard in front of an ancient Greek dwelling house; but in later times it was very generally used to designate the interior courts or peristyles of the house itself.

\* *Lives of the most renowned Saints of England, Scotland, and Ireland.*—Rev. F. J. Porter, O.S.B. Douay, 1632.

The aule of the Greeks was in all essentials similar to the cavaedium of the Romans. In dwellings of any pretensions, an aule or peristyle formed the central portion of each of the main divisions, namely, the andronitis, or men's apartments, and the gynaeconitis, or women's apartments. They were connected together by a passage, the door (μέσσυλος) of which opened from the centre of the aule of the andronitis, opposite the entrance (θυρ) from the street. This was the only door of communication between one aule and the other; and, when shut, it entirely separated the two departments of the house. The aule was surrounded on three or four sides by porticos (στοαι). Vitruvius tells us that the peristyle of the andronitis had porticos on its four sides; and that sometimes that towards the south was constructed with higher columns than the rest, and designated a Rhodian portico. The central space (ὑπαίθρον) was open to the sky, as in the Roman cavaedium.<sup>1</sup>

Latin writers use the term aula, with several significations; the most usual, however, appears to be an open court or a vestibule to a house or palace, and sometimes a palace itself. Middle age authors also give it different meanings, employing it to designate an entire church or, in a more limited sense, the nave of a church only.<sup>2</sup> In *Domesday Book* it generally implies a hall or mansion belonging to a manor. "Hunter, in his *Hist. of Hallamshire*, p. 17, says, 'few aulæ are mentioned in Domesday Book; and when they do appear, they are commonly found in the manors possessed by the prime Saxon nobility. They were the courts and places of the persons to whom they belonged, and doubtless were as much superior to any ordinary manor-house, as is the mansion of any modern nobleman to the edifices which now bear that name. They were to the prime nobility what the *aula regia* of writers of a somewhat later period was to the king.'"<sup>3</sup> In the ninth century plan of the abbey of St. Gall, the residence of the abbot is termed aula. Professor Willis, in his admirable article on this plan, says:—"Aula, the residence of the abbot, also called the *palatium* and the *abbatia*, stands outside the monastery, is surrounded by a fence, and consists of two buildings, one of which is inhabited by the abbot himself and the other by his servants," etc.<sup>4</sup> By certain writers, the term has also been used for a market place (*Fr. halle*), and for an enclosure in which animals were kept.<sup>5</sup>

<sup>1</sup> The student will find this subject more fully treated, and Vitruvius' description of the interior arrangement of Grecian dwellings, in our article *House*.

<sup>2</sup> "AULA, Ecclesia, Basilica, Templum, interdum sola Ecclesiæ navis, Gall. *La nef*.

"AULA ECCLESIE, Navis Ecclesiæ. Gervasius Dorobernensis in Descript. Cantuar. Ecclesiæ: *Ab hac versus Occidentem Navis vel Aula est Ecclesiæ subnixæ utrinque pilariis octo. Utitur non semel. Eadmerus lib. 6. Hist. pag. 141. In medio Aula majoris Ecclesiæ decenter sepultus est.*"—Ducange. *Glossarium*.

<sup>3</sup> Quoted in Britton's *Dict. of Archt. and Archæol.*

<sup>4</sup> See *The Archaeological Journal*, vol. v., p. 106.

<sup>5</sup> "AULA, pro Nido avium & Receptaculis animalium, apud Servium ad lib. ix. *Æneïdos*.—Ducange. *Glossarium*.



**AULAEA OR AULAEUM.** (*Lat.*) The term used by certain writers to designate the curtain or hanging which was sometimes suspended in porticos, or between the columns of hypæthral atria. According to Servius and Varro, the application of the word arose from the extensive use of such hangings in the aula or palace of Attalus, king of Pergamus, made familiar to the Roman people when they took possession of his treasures.<sup>1</sup>

Late Latin authors apply the term, in a similar way, to the hangings suspended about the sacarium of a church, across the openings of arches, or between pillars.<sup>2</sup> The term is also written AULATICUM.<sup>3</sup>

**AULEOLUM.** The mediæval term for a small chapel or oratory.<sup>4</sup>

**AUREOLE AND GLORY.** The term *aureole* is used by archæologists and students of Christian iconography to designate the attribute which surrounds the entire figure, in representations of the Persons of the Holy Trinity, their symbols, the Virgin Mary, and certain other personages and symbols. The aureole, as rendered in art, represents a halo of light emanating from and surrounding the body with a soft effulgence, or a fiery emanation of vivid rays or flames, which assume straight or wavy forms, arranged in radiating fashion. From this definition, it will be observed that the aureole is similar to the nimbus in its nature; differing from it only in form and in being applied to the entire body instead of being confined to the head.<sup>5</sup> "The word aureole," says the learned French archæologist, M. Didron, "is derived from the Latin *aureola*, the diminutive of *aura*, a breeze, zephyr, breath; *aura* also means day and light, because the rising light of day is ushered in by the morning breeze, or perhaps bright rays and flame, which are as it were the efflorescence of light and day. *Aura* comes from the Greek *αὔρα*, a gentle wind, zephyr, exhalation, vapour, *aurora* in short. These meanings may all be reduced to one only, luminous breath—indicating precisely the nature of the aureole, which is itself a flame, and expressed in iconography by undulations surrounding the body, or by lines, intended to represent rays of

<sup>1</sup> *Dict. of Arch.*, Arch. Pub. Soc., Lond.

<sup>2</sup> "AULA, pro Aulæum, Gall. *Tapiserie*. Th. *Madox Formul. Anglicanum* pag. 427. *Unam Aulam viridem cum armis meis, & unam Aulam bleu cum toreillis cum lecto ejusdem settæ.*"—Ducange. *Glossarium*.

<sup>3</sup> "AULATICUM, Aulæum, *Tapiserie*. Testamentum Arnaldi Archiepisc. Narbonensis an. 1149. apud Catellum: *Lazo Canonicis. . . omnem supellectilem meam domus meæ Narbonæ, in lectis videlicet, pannis vel Aulaticis.*"—Ibid.

<sup>4</sup> "AULEOLUM, Sacellum, ab Aula, Ecclesia, de qua suo loco. *Miracula S. Urbani Mart.* tom. 6. Maii pag. 18. *In qua benedictione dum carpentarii vellent aptare analogium ad sermocinandum, de Auleolo S. Urbani quod situm erat super maternam, ubi solebat poni corpus, Urbani pretiosi martyris exigente ratione temporis, membratim disjunctum nullatenus reintegrare valuerunt.*"—Ibid.

<sup>5</sup> The student will find the subject of the nimbus fully treated in our article devoted to that attribute.

light. The aureole and the nimbus are identical in their nature, which is that of a transparent cloud or a solid light. The luminous atmosphere, described by Virgil as encircling the goddess Minerva, and which he expresses by the words 'nimbo effulgens,' was undoubtedly an aureole, rather than a nimbus.

"Jam summas arces Tritonia, respice, Pallas  
Insedit, nimbo effulgens et Gorgone sæva."

*Æneid*, book ii., v. 615.\*

As we have found it quite impossible to fully describe and illustrate the aureole proper, without treating of the glory also, we have brought them together here. The term *glory* is understood by students of iconography to signify the combination of the nimbus and aureole, by which the most exalted state of deification is expressed. Some confusion exists, amongst artists and authors, regarding the true meaning of the terms nimbus, aureole, and glory; and we may, with advantage to the general reader, put their strict significations briefly. The nimbus is the attribute placed behind the head, as a mark of divinity or proof of holiness. There is only one exception to this application,—that is presented by the hand (symbolical of the "Hand" and the "Arm of the Lord"), which has frequently been invested with the nimbus. (See *Hand* and *Nimbus*). The aureole is the attribute which is placed behind and surrounds the entire body or object represented; it is of a higher grade than the nimbus, expressing deification or exalted divinity. The glory is the combination of both the nimbus and the aureole in connexion with a single personage, and expresses the highest possible state of deification, divinity, majesty, and power.

Throughout the whole of our Dictionary the three terms are consistently used with the above significations. †

\* We must not delay acknowledging the great value of the labours of the late M. Didron in connexion with the subject of Christian iconography; and the assistance we have derived, in our own studies, from his works. In the present article we have availed ourselves of much of the information condensed in his admirable treatise on Christian iconography, and have been induced, from the aptness of his illustrations, to reproduce several. Where practicable, however, we have preferred giving new examples, extending the range of the subject so far as lay in our power.

† The term AUREOLA or aureole has very commonly been used by archæologists to designate the nimbus; and they certainly have the authority of Ducange for so doing, as will be seen by the following quotation from his *Glossarium* :—

"AUREOLA, Joanni de Janua, est præmium quoddam merito redditum. Vide eumd. in verbo *Virgo*. Matthæus Westmon. anno 1284. *Alfonsus Regis primogenitus veniens ad Westmonasterium, quandam Aureolam, quæ fuerat quondam Principis Walliæ Leolini, cum aliis jocalibus afferebat, quibus beati Regis Edwardi feretrum ornabatur.* Alanus in *Anticlaudio* lib. 4. cap. 8.

*Vel quos Aureolæ munus non excipit, omnes  
Laurea communi fretos mercede coronat.*

"De variis *Aureolis*, quibus pro merito Beati donabuntur in cœlis Josephus Angles in 4. Sent. dist. 49, art 6. conclus. ult. ait, quod in corporibus *Virginum, Martyrum atque Doctorum*

Christian artists no doubt derived the aureole, as they did the nimbus, from Pagan sources; they certainly found, as has just been shown, allusions in the Classic authors which suggested the appropriate idea of surrounding celestial beings with luminous clouds or emanations. They had, however, no authorities for its shape or artistic treatment, and may fairly claim the merit of having originated the several forms which the attribute assumes in Christian iconography. These, as will presently be shown, were arrived at in the process of adapting the aureole to the different postures and outlines of the figures represented; and in the hands of the middle age artists assumed symmetrical or severe geometrical forms. The aureole appeared in Christian art at a much later date than the nimbus; and practically fell into disuse in western art, when the nimbus began to lose its strictly conventional character. In Greek art it has never varied much, nor has it ever disappeared.

The first idea of the aureole was evidently that of luminous vapour, or clouds which received and localised, as it were, the light which issued from the body. St. Dionysius the Areopagite, in his *Celestial Hierarchy*, speaks of the angels as being robed in clouds; and just as Christian artists readily accepted his teaching with reference to the Orders and Choirs of angels, so would they freely adopt the idea of enveloping them in clouds. The peculiar spirit of mediæval art, however, was averse to the representation of anything so immaterial and undefined as a vapour or ever-changing cloud; and only approached the task in the most guarded and conventional manner. Accordingly, in the earliest examples of the aureole, we find it rendered as a distinct form, with boldly-defined boundary lines; assuming the office of an attribute, about the signification of which there could be no uncertainty. The idea of the clouds is not altogether lost sight of, however, in these conventionally rendered aureoles; indeed, we find in some examples that the clouds are freely expressed, as in that shown in Fig. 1 (from the thirteenth century glass of Chartres cathedral), which surrounds the soul of St. Martin as he ascends to heaven. From the time of Dionysius it remained a favourite impression throughout the middle ages that the angels moved to and fro, and that the souls of the blessed ascended to heaven in clouds of fiery light. St. Ouen, in his *Life of St. Eloi*, thus speaks of the resplendent aureole, the spherical light, the pharus which enveloped the soul of the Saint as he ascended to heaven:—"Inter verba orationis flagitatum a superis emisit (Eligius) spiritum. Statim vero cum esset hora prima noctis, visus est subito velut pharus magnus ingenti claritate resplendens ex eadem domo

*erunt insignia quædam, quibus hujusmodi Aureolas in anima habere præ se ferent; quodque Virgines in capite aliquam coronulam albam, Martyres rubram, & Doctores viridem gestabunt."*

What is alluded to in the first paragraph is uncertain, but it is in all probability some insignia or mark granted as a reward for merit which may have been worn on the head. The second paragraph hints in this direction, in stating that those who were not recipients of the aureole were crowned with laurel. The concluding paragraph clearly alludes to the nimbus; and tells us that Virgins carry on their heads white aureolæ; Martyrs, red ones; and Doctors, green coloured.



coruscando conscendere, atque inter mirantium obtutus *sphæra ignea* crucis in se semilitudinem præferens, velocique cursu densitatem nubium præteriens, cœli altitudinem penetrare.”\* The peculiar wavy ornament round the aureole of St. Martin represents clouds, after the usual manner of the middle age artists. Such purely conventional representations of moving clouds are frequently met with in thirteenth and fourteenth century stained glass and miniatures of illuminated manuscripts.

Several forms of the aureole have been used in Christian art, generally designed with the view of suiting the standing or sitting positions of the figures they enclosed. The form which has most commonly been adopted for the standing figure is that which is outlined by two equal arcs of a circle, touching each other at their extremities, such as the portion



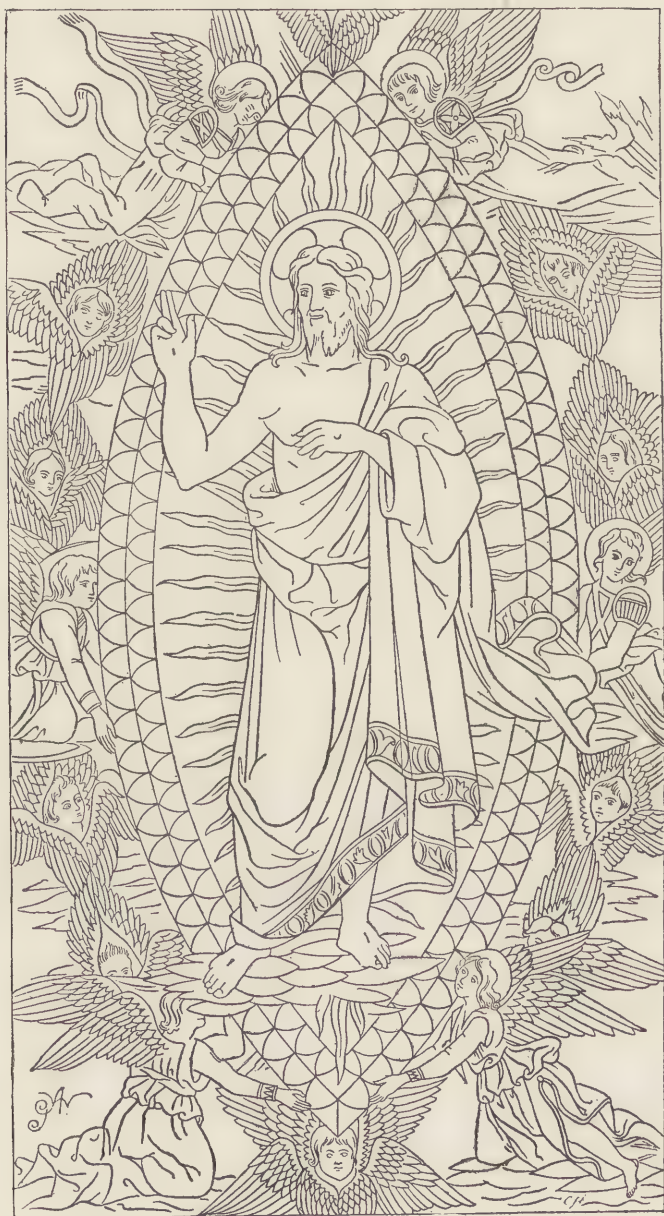
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surrounded by the clouds in Fig. 1, and that represented in Fig. 2, from one of the copper-plate engravings in *Il Monte Sancto di Dio*, by Antonio Bettini, of Siena, printed in 1447. This form of the aureole has been vulgarly termed the “*vesica piscis*” by numerous English archæologists. Why it was necessary to resort to so remote a source for an inexpressive name for the simple pointed aureole is not easily explained; and, as M. Didron justly remarks, “a term so gross deserves to be expunged from every refined system of terminology.” We shall certainly ignore

\* Quoted in *Iconographie Chrétienne*, p. 127.

the term in our Work, dismissing it as quite unworthy of further comment.

This form of the aureole is treated in various ways ; sometimes it is



quite plain over its entire field, as the centre portion of Fig. 1 ; and at other times it is bordered with ornament, and covered with straight or flamboyant rays, as in Fig. 2. In the latter case, it is expressive of

the most intense radiance, and of the exalted degree of the personage it invests. Examples are to be met with where the artist has surrounded the aureole with divergent rays, extending its refulgence beyond its defined field, as in Fig. 3, from an Italian miniature of the fourteenth century. In



3

this illustration, the aureole assumes the form of a framework, with an arched piece across it, serving as a seat for the enclosed figure. The whole appears of a very material nature, far removed from the idea of clouds or a field of radiant light, notwithstanding that the artist has introduced numerous rays, both within and beyond the framework, to express effulgence. In Fig. 4 we find the same description of frame aureole, containing a standing figure, devoid of all indication of radiance, and with its material nature fully set forth by the manner it is carried by the six angels. This is from the *Speculum Humanæ Salvationis*, an Italian manuscript of the fourteenth century, in the Bibliothèque Royale, Paris. The aureole in Fig. 2, although differently treated, assumes a material character, in so much that it is apparently supported by angels.



In Italian mediæval art, the pointed aureole is almost invariably met with, and its boundary line is firmly defined, as in the Italian examples, Figs. 2, 3, 4, 18 and 20. Throughout the miniatures of that wonderful tenth century manuscript, in the possession of the Duke of Devonshire, known as the *Benedictional of St. Æthelwold*, we find the pointed aureole used exclusively. In all, it appears substantial and boldly-defined; indeed, in two instances the artist seems to have endeavoured to give an idea of thickness, by representing the edge nearest to the eye. His imperfect



4

knowledge of perspective, however, has caused him to do this so clumsily that his intention is open to conjecture. We think there is little doubt that he did intend to depict the edge, and, accordingly, the thickness of the aureole; for, in both the miniatures, the figures of Our Lord are represented moving towards the side, carrying their aureoles, as it were, behind them. This will be clearly understood by referring to Fig. 5, which is taken from the miniature of the Ascension. In the original, the aureole is rising amidst clouds, followed by angels; these we have omitted as unnecessary in our illustration. M. Didron does not appear to have met with what we may designate the aureole in perspective, for he neither mentions nor illustrates it in his book. We have no record of having seen it in any work of art save that from which our illustration is taken. In only one instance do we find the arched piece carried across the field; but here it does not span it near the middle of its height and

pass behind the figure, as in the Italian examples, Figs. 3 and 4, but is placed close to the lower point, and supports the feet of the figure. This portion is shown in Fig. 6. The miniature in which this treatment obtains is that representing the Incredulity of St. Thomas.\*



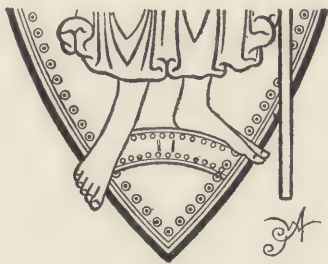
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With reference to the arched member, which is so frequently seen spanning the field of the aureole, and which the Italian artists commonly represented as a part of the frame-work, there can be little doubt that it was originally introduced to represent the "bow in the cloud;"† or the rainbow, in allusion to the vision of Ezekiel:—"And above the firmament that was over their heads was the likeness of a throne, as the appearance of a sapphire stone: and upon the likeness of the throne was the likeness

\* There are so many points of resemblance between the aureoles in this manuscript and those commonly found in Italian art, that one would almost suppose that it had been illuminated under some direct Italian influence. Its early date (963-984), and the peculiar richness of its colouring, rather disprove this supposition. It is generally believed that the illuminator was an Englishman, and if he was subjected to any immediate influence in his work it is most probable that it was of a Byzantine origin. There is much in the art of the book to incline one to accept this opinion. Italian manuscripts did not display elaborate detail and rich colouring before the beginning of the thirteenth century.

† Gen. ix. 13.

as the appearance of a man above upon it. And I saw as the colour of amber, as the appearance of fire round about within it, from the appearance of his loins even upward, and from the appearance of his loins even downward, I saw as it were the appearance of fire, and it had brightness round about. As the appearance of the *bow that is in the cloud*



## 6

*in the day of rain*, so was the appearance of the brightness round about. This was the appearance of the likeness of the glory of the Lord.”\* We have given this passage in full, for it has important bearing on the present subject, having doubtless been deeply studied by the mediæval artists in rendering the aureole and glory.

In many instances more than one bow are introduced. On this point, Didron remarks:—“When God is represented sitting within an aureole, His feet are frequently placed upon the rainbow; a second rainbow supports his back, and a third forms a pillow for his head. This is a fine idea, especially when the field of the aureole is blue, studded with golden stars, and the frame greyish and undulating like clouds. The two rainbows of the head and back are often suppressed, for the Deity needs no support; in this case the rainbow of the feet is sometimes replaced by a carpet of gold, starred with silver.” The glory of heaven, expressed by concentric arches of light or rainbows, is beautifully rendered in a miniature of the Triumph of the Lamb, in an evangelarium illuminated for Charles the Bald. Here, however, the bows are outside the aureole containing the Agnus Dei, which appears suspended against the numerous arches of light.†

The careful examination of a great number of examples, inclines us to question if it was invariably the artist's intention to represent the rainbow by this arched feature of the aureole; that such was his desire in many cases is clearly shown by his treatment of it, in form and colour. The form we are now going to speak of appears to have grown out of the practice of employing two aureoles for one figure; the lower one of which

\* Ezek. i. 26-28.

† A fine engraving of this miniature is given in *Nouveaux Mélanges d'Archéologie*. Paris, 1874.



serves as a seat, while the upper one surrounds the remaining portion of the body. A characteristic example of this is presented by the central panel of the golden cover of the evangelarium just alluded to, an outline drawing of which is given in Fig. 7.\* Comparing this with Fig. 8, from the sculptured tympanum of the portal of the church of Saint Trophime,



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at Arles (twelfth century), it will be seen that the lower portions in both are almost identical in shape; the upper part in the latter example being enlarged so that its curves die into those of the lower. The portion which crosses the field in this instance can hardly be construed into the likeness of a rainbow; indeed, the sculptor has, by his system of ornamentation, done his best to inform the observer that the arched seat of the figure is simply an integral part of the framework or border of the aureole. In this respect it is much the same as in Figs. 3 and 4. In later art we find the "bow in the cloud" very distinctly expressed; for instance, in the aureoles of the Saviour and the Virgin, in Orcagna's fresco of the Last Judgment, in the Campo Santo, at Pisa. We give a drawing of one of these aureoles in Fig. 20.

Up to this point we have almost exclusively directed our remarks to the

\* Two other examples of this form of aureole (from tenth and eleventh century works) are given in *Iconographie Chrétienne*, pp. 47 and 125. Both contain seated figures, one of Our Lord, and the other of the Virgin Mary.

pointed or lenticular aureole; we have now to direct the student's attention to the other forms the attribute has assumed in art. The one which now presents itself differs but little from the lenticular; it is the oval or elliptical form. It is shown in the examples from the evangelarium and the church of Saint Trophime, and really requires no further illustration.



8

There is little doubt that artists adopted the double aureoles, as in Fig. 7, with the view of adapting the general outline to the seated figure; and in Fig. 9 we find a similar attempt to bring the expanse of the aureole more in conformity with the lines of the figure it surrounds. In this interesting example, from the tenth century manuscript of Saint Sever, in the Bibliothèque Royale, at Paris, the main portion of the aureole is reduced in size, and has two lobes, at top and bottom, to receive the nimbus and the feet of the figure. Outside its defined margin are several layers of fleecy clouds, which extend its effulgence in gradations of intensity. The singularly self-supporting effect imparted to the aureole by this treatment, and the idea of dignified motion—the coming of the Son of Man in the clouds of heaven with power and great glory\*—which is conveyed to the mind by the attitude of the figure and its surroundings render this miniature worthy of careful study.

The forms which appear best suited for a throned or seated figure, with arms outstretched, are the circle and quatrefoil; and both these have been frequently used. A fine example of the circular aureole is presented on the magnificent dalmatic, known as the imperial dalmatic of Pope Leo III., preserved in the treasury of the cathedral of St. Peter, at Rome; a work of the most elaborate description in embroidery, of Byzantine origin,

\* Matt. xxiv., 30. Mark xiii., 26.

attributed to the twelfth century. We are enabled to give a drawing of the chief portion, containing the aureole alluded to, Fig. 10. The aureole is a plain disc, spanned in its lower part by a rainbow, upon which is seated our Saviour, invested with the tri-radiated nimbus, and bearing in His left hand the open book. Issuing from the edge of the field are the symbols of the four Evangelists carrying copies of their Gospels. Around the aureole proper is the region of heaven, studded with the sun, moon, and stars; above the aureole stands the cross of Calvary, with the emblems



## 9

of the Passion; and on each side are the choirs of angels, the Blessed Virgin, and numerous saints. Probably a more beautiful illustration of the circular aureole does not exist in mediæval art.

Another interesting and curious example is supplied by a late fresco in the church (Panagia Phanéroméni) of the great convent of Salamis, Fig. 11. Here the field of the circular aureole is intersected with two quadrangular forms with curved sides, forming an eight-pointed star; radiating lines, issuing from its centre, reach nearly to the edge of the disc; and two arched lines, representing rainbows, span its lower portion and form the seat and footstool of the figure. The figure is that of Christ coming in glory as the supreme judge; His head is invested with the Greek tri-



radiated nimbus, and His right hand gives the blessing, according to the form of the eastern Church. The aureole appears borne by four cherubim.

Circular and elliptical aureoles, with radiating bars, like the spokes of a wheel, are met with in eleventh and twelfth century art, chiefly in representations of the Transfiguration, executed under Byzantine influence.



The same treatment has, indeed, continued in use in Greek painting, which never appears to advance beyond the point fixed by its early canons. The illustration we give of this peculiar treatment (Fig. 12) is from the eleventh century bronze doors of the basilica of St. Paolo fuori delle Mura, at Rome, now, unfortunately, no longer in existence. The idea to be conveyed by this form of aureole is obscure; it may very probably have been intended to express the name, Jesus Christ, after the fashion of the old Greek monogram, in which the initials I, X, of the words Ἰησοῦς Χριστός, are united into a wheel-like device, as in Fig. 13, from the church of St. Demetrius, at Thessalonica; here the *iota* (I) is formed into a cross by the addition of a horizontal bar, a very commonly adopted expedient. Didron

speaks of this form of aureole in the following words, but does not attempt to give a reason for its adoption, or any clue to its significance, beyond implying that the bars, as rays, have some connexion with the personages represented as the witnesses of the Transfiguration:—"A la Transfiguration, chez les Byzantins et les Grecs modernes, l'aurole qui entoure Jésus-Christ offre une particularité. Cette aurole a la forme d'une roue. Du centre ou du moyeu partent six rayons qui vont toucher aux jantes, à la circonférence; mais ces rayons, au lieu de s'y arrêter comme dans une

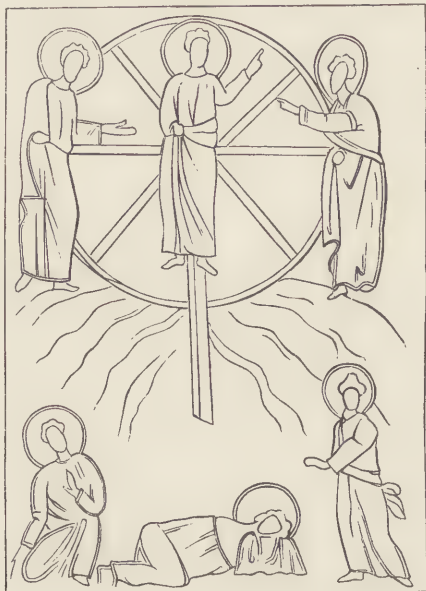


## 11

roue ordinaire, se prolongent et aboutissent l'un à Moïse, l'autre à Élie, le troisième à saint Pierre, le quatrième à saint Jean, le cinquième à saint Jacques. Ces personnages sont les seuls qui aient assisté à la transfiguration ou métamorphose, comme disent les Grecs. Quant au sixième rayon, il est absorbé ou caché par Jésus lui-même. Le Christ est appliqué contre cette gloire en roue; on dirait qu'il y est cloué comme à un instrument de supplice, car c'est ainsi que l'on représente le martyr de saint Georges qui fut roué. Cette disposition singulière est des plus rares chez nous; on ne la voit que dans les édifices qui semblent trahir des influences byzantines au moins indirectes, comme Notre-Dame de Chartres, d'où est tiré le dessin suivant, copié sur une des trois grandes verrières romanes du portail occidental.\* En Sicile, au contraire, cette portion de l'ancienne

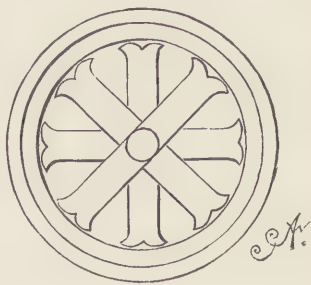
\* The illustration here alluded to will be found in M. Didron's *Iconographie Chrétienne* (p. 119); we have not reproduced it as it does not appear to us to be very apposite; firstly, because it contains eight rays and not six as mentioned in the text; and, secondly, because it

Grande-Grèce où le rite grec des offices religieux est encore observé aujourd'hui et dans plusieurs localités, ce genre de transfiguration est



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constant ; on le remarque principalement dans les peintures à fresque qui décorent la chapelle royale de Palerme. Là on voit une auréole elliptique et non circulaire ; mais les rayons sont en nombre égal à ceux de Chartres, et tombent ou s'élèvent de la même manière en partant du divin transfiguré." With reference to the rays having connexion with the witnesses—Moses, Elias, St. Peter, St. John, and St. James—we consider that the fact of there being eight instead of five rays, and their assuming a strictly geometrical arrangement, clearly dispels the idea. Nor, indeed, is our own supposition, which only applies to groups of six or eight rays, always



13

can scarcely be considered the aureole proper of Christ. It is large, and comprises within its field the mount and all the personages present at the Transfiguration ; and in addition, Christ is invested with a *special* aureole, conclusively proving, to our minds, that the large circular figure was not intended as an aureole, but only a sort of symbolical frame-work to the general subject—the combined emblem of eternity and the monogram of the sacred name. In our illustration the circle is strictly the attribute confined to Christ, the eight rays forming the likeness of the Greek monogram, the upper part of the *iota* being covered by the figure.



supported; for occasionally, though very rarely, more than eight are introduced; but in such cases the wheel-like treatment is abandoned by the omission of the felloe or ring. In the Transfiguration depicted in the cathedral of Monreale, near Palermo, the same number of rays (straight bars of blue and white) as appear in Fig. 12, are introduced. The three lower ones certainly reach and disappear behind the apostles, at the foot of the mount, the four lateral bars passing behind Moses and Elias. This example, though apparently supporting Didron's idea that the rays are in some way related to the witnesses, does not overthrow the proof, which is presented by our illustration, that the rays are introduced with no such intention. In it, at least, no bars have special connexion with the



figures; whilst the likeness of a cross, planted on the mount, against which Christ is lifted up, is obvious. Whether the whole device represents the sacred monogram within the emblem of eternity, is certainly open to conjecture; we can only say, from our long study of Christian iconography and symbolism, that had artists intended these rays to have special relation to the five witnesses, five rays only would have invariably been adopted. Confusion is studiously avoided in Byzantine art; and it is to be regretted that the *Guide to Painting* is not a little more explicit in

its remarks, which are as follows, according to the able translation of Dr. Paul Durand :—

“ LA TRANSFIGURATION.—Une montagne avec trois cimes. Sur celle du milieu, le Christ debout avec des vêtements blancs ; il benit. Tout autour, une lumière avec des rayons. Sur la cime de droite, Moïse tenant les tables de la loi ; sur la cime de gauche, le prophète Élie. Tous deux sont debout et regardent le Christ d’une manière suppliante. Au-dessous du Christ, Pierre, Jacques et Jean couchés à plat ventre ; ils retournent la tête pour regarder en haut et sont comme en extase. Derrière, sur un côté de la montagne, on voit encore le Christ montant avec les trois apôtres et leur indiquant le sommet de la montagne. De l’autre côté, les disciples descendent avec crainte et regardent en arrière. Le Christ, derrière eux, les bénit.” \*

On the back of the imperial dalmatic, already spoken of, is a most interesting representation of the Transfiguration, which, in the treatment of the aureole, supports our opinion that the radiating bars or rays have no connexion with the witnesses. We give a drawing of the figure of Christ, with the aureole complete, in Fig. 14. The figures of the apostles are placed far away at the foot of the mount, and none of the rays even point in their direction, whilst those of Moses and Elias stand at such a distance that the side rays do not come near them. In this instance there is no vertical bar or ray to suggest the cross, or to carry out the idea of the monogram formed of the I and X. The peculiar shape of this aureole is worthy of notice.

In certain representations of the Transfiguration, three vivid rays of light, unmistakable in their intention, descend towards the apostles in the foreground, but these have no connexion with the aureole. In an ivory carving, of twelfth century workmanship, † the figure of our Lord has no aureole, but three broad divergent rays issue from the sides and feet, and flood the apostles, who appear to shrink from their brilliancy. And in another representation of the event, in a Russian bronze casting, containing scenes from the life of Christ and the Virgin, the figure of our Lord is invested with a circular aureole, covered with stars and divergent lines ; and, in addition, appear the three great rays descending on the apostles, who crouch towards the ground to hide their faces from the great glory. In neither of these examples have Moses and Elias any rays directed towards them.

Cusped or foiled aureoles are sometimes met with, although they are by no means so common as the lenticular, oval, and circular forms. A painting (twelfth century) in the crypt of the cathedral of Auxerre, furnishes a good example of a quatrefoil aureole, Fig. 15. The portion outside the dotted line has been destroyed, but we have ventured to restore the part so as to show the design entire. This form of aureole is admirably suited for

\* Byzantine Guide to Painting, a manuscript from Mount Athos.—*Manuel d’Iconographie Chrétienne, Grecque et Latine.* Paris, 1845, p. 178.

† An illustration of this ivory is given in *Nouveaux Mélanges d’Archéologie.* Paris, 1874, p. 60.

a seated figure, such as that represented, or the fine one which occupies the centre of the west rose window of the cathedral of Chartres. In this latter instance the figure of Christ is depicted seated, and with arms outstretched and extending into the lateral foils of the aureole; His throne, head, and hands have, accordingly, each their special part of the quatrefoil. At Auxerre, the form has been adopted so as to admit of the convenient introduction of the two seven-branched candlesticks within its field; and the symbols of the four evangelists, in special circular aureoles, outside its cusps. There is little doubt that, in all such aureoles as these, as well as those represented in Figs. 10 and 11, the artists' intentions were to set



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forth the region of heaven, the immediate presence of the Deity, and the centre of His glory, rather than the effulgent cloud-like or material radiance which is expressed by the usual elongated aureoles moving through space or borne by numerous angels, as represented in Figs. 1, 2, 3, 4, 5, and 9.

In late mediæval art, aureoles are frequently found formed entirely of flamboyant members or pointed rays issuing from their centres, and devoid of borders or outlines. Didron gives an illustration of one of these aureoles, surrounding the Virgin and Child, taken from a miniature of the sixteenth century.\* A still more beautiful example is to be found in the suspended figure of the Virgin and Child, in the church of Kempen (Westphalia); here the aureole is, along with the entire work, executed in metal, painted and gilded. The aureole is formed of twenty-eight long rays,

\* *Iconographie Chrétienne*, p. 131.



alternately straight pointed and flamboyant; their points indicating the lenticular form. Above the Virgin, on the suspension rod, is the figure of God the Father, invested with a triangular nimbus and surrounded by an aureole formed of eighteen flamboyant rays. As neither the Virgin nor Child have the nimbus, God alone appears in glory. This beautiful work is engraved in Gailhabaud's *L'architecture du V<sup>me.</sup> au XVII<sup>me.</sup> siècle.*\* In Fig. 16, we give an example of a glory formed entirely of straight pointed rays arranged in radiating fashion, both from the body and head.



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This uncommon treatment is found on the stalls of the municipal chapel, at Siena. The arrangement of the angels which enclose the glory with their wings is unique.

There is one other variety of the aureole to which we must allude before passing on to another section of our subject; this is the star-form, produced by the combination of two or more equilateral triangles. A good example is furnished by a Greek painting (fifteenth century), illustrated in full in Didron's *Iconographie Chrétienne*. In Fig. 17 is given the aureole only, containing the half-figure of Christ represented with wings, as the "angel of the divine Will," according to the language of the Greek Church. By the combination of triangles the artist has intended to convey, in the most forcible manner, that Christ is God, representing in His own

\* Vol. iv., Art. *Vierge Suspendue*.

person the Blessed Trinity. Aureoles of this description are comparatively rare in Greek art; and we are not aware of a single example obtaining in western art.



17

Up to this point we have confined our remarks chiefly to the forms or outlines of the several aureoles introduced by Christian artists; we have now to briefly describe their surface treatment and colour.

With the desire to show the nature of the aureole, and to express soft effulgence or vivid scintillation, the field is either covered with radiating lines, as in Figs. 3 and 11, or with flames, as in Fig. 2, in both cases emanating from the figure and diverging towards the edge of the aureole. In illuminations, these rays are usually of burnished gold, producing a most brilliant effect; in mural paintings and stained glass, they are either of yellow or red, the representatives of light and fire.

The colour of the field, upon which the golden or flame-coloured rays are placed, varies in different examples; the most appropriate, however, is blue, representing the clear sky at noon, such as one sees only in southern Italy. This is the field across which the rainbow throws its arc, with its full mystic significance; the bow not only shown to man in the cloud, but abiding ever in the full splendour of the glory of heaven.

In addition to the divergent rays, other objects are sometimes introduced in the field. In the picture of the Last Judgment, by Fra Angelico, preserved in the Academia delle Belle Arti, at Florence, our Lord is invested with a rayed lenticular aureole, upon the broad margin of which are depicted eight seraphim. On the reverse of a medallion in bronze, struck in commemoration of a council held by Pope Paul V. (Pietro Barbo, the Venetian, 1464-1471), is the representation of the Last Judgment, in which the aureole of the Deity is bordered with numerous cherubim, with their heads and wings closely and uniformly adjusted together. In the beautiful picture of the Last Judgment, by Fra Angelico, in the possession of the Earl of Dudley, the field of the aureole is divided into three concentric divisions; the inner one, next the figure of Christ, being as it were the nucleus or space of concentrated light; around this is the second

division, covered with divergent rays and containing several seraphim, issuing from the edge of the inner portion. The outer division acts as a border to the whole, and is covered with a succession of cherubim. Clouds, amidst which angels are flying, are placed under the feet of Christ, forming both his throne and footstool.\* The field of this aureole is full indeed, and forcibly brings to one's mind the overwhelming majesty of the final Judge, when He shall come, surrounded with the countless hosts of heaven, to deal justice to risen man. M. Didron, speaking of aureoles similarly treated, says:—"A painting on wood, in the church of the abbey of St. Riquier, representing the Assumption, shows in the upper part of the picture, or, as it were, in heaven, the Holy Trinity preparing to receive Mary, who is lifted up by angels and borne towards heaven. The Holy Trinity appear in the field of an aureole, nearly circular in form, round the margin of which a cordon of angels glitters. The superb *Cité de Dieu*, translated by Raoul de Presles, preserved in the Bibliothèque de Sainte Geneviève, presents several examples of similar aureoles surrounding the Deity; these are carpeted with seraphim and cherubim of gold, flame-colour, and azure."

We cannot, however, look upon the angel forms thus introduced on the field of the aureole as integral parts thereof; they simply are intended to indicate the close relation to God of those choirs of angels whose office it is to sing His glory and love, and proclaim His wisdom before His throne for ever. This close relation is forcibly expressed by placing the angels so near the Deity as to be enclosed in the intense radiance which immediately surrounds Him—a glory which artists have intensified in their representations by rendering the angels as beings formed of light and living flame. The same idea of close relationship to God has also been otherwise expressed by investing certain angels with the aureole, which is, according to the strict rules of Christian iconography, exclusively the attribute of the Deity. In the magnificent thirteenth century glass of the south transept of Chartres cathedral, we find the thrones enclosed in crimson aureoles of elliptical form. The thrones appear as two great angels with green wings and bearing sceptres. These beings express perfect rest—the everlasting stability of the throne, sceptre, and power of the Almighty.

There are other objects introduced in the field of the aureole, which appear somewhat out of place, and in connexion with which the artists' intentions are rather obscure. This is the case with the candlesticks represented in the aureole in the crypt of the cathedral of Auxerre (Fig. 15). It was probably the artist's intention to represent the "seven lamps of fire burning before the throne, which are the seven Spirits of God;" but on what grounds two candlesticks, holding fourteen lights, are introduced it is difficult to conjecture.

\* An outline drawing of this picture is given in *The History of Our Lord*. Lond., 1864. Vol. ii., p. 414.



It is obvious that there exists a great difference between such an aureole as the one just spoken of and those represented in Figs. 1, 2, 3, 4, 5, and 9; and our own studies in iconography incline us to accept two varieties of the aureole, entirely different in their significations. Aureoles such as that at Auxerre, and those represented in Figs. 10 and 11, appear to us to express the region of heaven immediately surrounding the throne of God; in such, with perfect consistency, may be depicted the seven burning lamps, and all, indeed, that is described in the Revelation: "Behold, a throne was set in heaven, and one sat on the throne. There was a rainbow round about the throne, in sight like unto an emerald. And round about the throne were four and twenty seats; and upon the seats I saw four and twenty elders sitting, clothed in white raiment; and they had on their heads crowns of gold. And there were seven lamps of fire burning before the throne, which are the seven Spirits of God. Before the throne there was a sea of glass like unto crystal; and round about the throne were four beasts full of eyes before and behind. The first beast was like a lion, the second like a calf, the third had the face as a man, and the fourth beast was like a flying eagle."

Also, with the view of conveying the idea of heaven by material objects, artists have powdered the field of the aureole with stars, and have introduced the sun and moon. On this subject, Didron remarks:—"The field of the aureole is sometimes lighted by two stars, shining near the head of the divine personage whom it invests; one star is on the right and the other is on the left. When the aureole is narrow, and the sitting figure has the right hand raised in the act of blessing, both stars are placed on the left, the opposite space being occupied by the hand. The whole field is occasionally, though rarely, gemmed with stars, like the sky on a clear night. The points of the stars vary in number from four to eight. The left-hand star is sometimes depicted with fewer points than that on the right. When such obtains, the right star is intended for the sun and the left for the moon, notwithstanding that both are similar in all other respects." In Fig. 10, the outer zone of the aureole is richly powdered with four-pointed stars; and towards the upper part the sun and moon are introduced, both in the shape of a crescent with a face within its horns.

In the examples given in Figs. 1, 2, 3, 4, 5, 9, 14, and 16, the simple idea of personal radiance is all that is aimed at—an effulgence issuing from the personage represented and more or less dispersed towards the confines, or localised within boundary lines, thus forming the clearly-defined attribute, correctly designated the aureole.

When seated figures of the Deity are invested with the aureole, either the rainbow or a throne is introduced in its field, as in Figs. 11 and 15. In Fig. 19, Christ is seated on the wings of seraphim which form His throne.

The field of the aureole is very frequently devoid of any ornamentation or insertion whatever, being margined with simple lines, or with a band bearing an inscription. The aureole of the Agnus Dei, in the miniature

of the triumph of the Lamb, in the evangelarium of Charles the Bald, is surrounded with a plain inscribed border : and in another miniature of the same manuscript, representing Christ surrounded by the four evangelists and the four great prophets, the aureole of our Lord has its field covered with concentric lines, and is surrounded with an inscribed band. No seat or throne appears, but the feet of the figure rest on a circular carpet powdered with star-like forms.

The colours of the aureole differ ; but those have been considered most appropriate which clearly represent fire and light, or are most closely allied to them, such as red, yellow, white, and azure. A summer day, with its expanse of blue sky and its vivid sunbeams, has furnished artists with the most appropriate suggestion for the colouring of the aureole indicative of celestial brightness. In illuminated miniatures and mural paintings, gold has always been preferred to any colour, especially for rendering or accentuating the vivid rays of light.

We now come to the third section of the present subject, namely, the application of the aureole. There is no doubt that the aureole is, in Christian iconography, strictly the attribute of the Deity ; and, even when the greatest liberty is taken with it, can only be correctly applied to the symbols of the Persons of the Trinity, or to heavenly personages who are repositories of the Almighty power and glory. With such an understanding, artists have represented the Virgin Mary, as queen of heaven, with the aureole ; and the thrones, in the thirteenth century glass of Chartres cathedral already spoken of, as the delegates of God's majesty and power, appear invested with the attribute. The aureole has never, to our knowledge, been applied to the representation of a human being in the flesh ; we have seen (Fig. 1) that it has occasionally been introduced in the representations of the ascent of the soul to heaven. Such an application, however, is incorrect ; and is one example of the many abuses which one continually meets with throughout the range of Christian art. A still more flagrant instance of the misapplication of the attribute is presented by a miniature in a tenth century bible, preserved in the British Museum, where we find Satan invested with an aureole of gloomy hue. The subject of this interesting miniature is the fall of the Rebel Angels ; it occupies the whole of the first page, and is treated with considerable power. The following description is given by Mrs. Jameson :—" The Deity—for there is no nimbus to indicate which Person of the Trinity—sits solemnly in an almond-shaped glory,\* upheld by two angels ; while two more hide their hands, in token of respect, beneath their drapery. From the threshold of heaven the angels are seen falling in attitudes indicating no small knowledge on the part of the unknown artist of nine centuries ago. They are in human forms—denuded of wings and drapery—the angel stripped till

\* An aureole is here intended ; the absence of the nimbus prevents the term "glory" being correctly used in this case.—W. & G. A.



nothing but man is left. Their faces are caricatures—those lowest being the most hideous; Lucifer himself lies beneath, brutified already with a tail—his person enveloped, strange to say, in an almond-shaped glory” (aureole), “which a red dragon seizes in his jaws and encircles with his coils. This is a unique instance, it is believed, of Satan thus encircled with an attribute hardly seen even surrounding the persons of angels. But here all its glory is dimmed. It is dull and dark, and was probably introduced to distinguish the arch-rebel from his followers.”\* There can be no doubt that such was one of the intentions of the artist, but we do not think it was the chief one. By investing Satan with the aureole, the limner desired to show from what a high estate the rebel had fallen—that while in heaven, he was one of the thrones, a delegate of the Most High; and by dimming the radiance of the attribute, and subjecting it to the dragon of destruction, he desired to show that, in hell, even the faintest remnant of his former greatness should be swept away.

The aureole, in its true character as a field of radiant splendour, is *par excellence* the attribute of God the Son. It is seldom given to Him in scenes which represent His life on earth; but consistently appears in those which follow the Crucifixion. The two scenes before the Crucifixion in which Christ appears invested with the aureole, are the Baptism and the Transfiguration. In the latter instance, its introduction is perfectly consistent; and it becomes a legitimate agent in the artist’s hands to set forth the sudden glory which surrounded the body of our Lord. In the former instance, its introduction does not appear so appropriate; it was probably introduced as a record of the declaration from heaven:—“This is my beloved Son;” as well as to express the brightness of the Spirit of God, which descended like a dove, and lighted upon Him. In the benedictional of St. Æthelwold, Christ is depicted, at His baptism, invested both with the aureole and the tri-radiated nimbus; while the Holy Spirit descends as a dove, bearing a peculiar object in its beak (probably a double ampul), but without the divine nimbus round its head. Of the aureole of the Transfiguration we have already spoken.

Immediately after Christ dies on the cross, art proclaims His divinity in an unmistakable way; the historical aspect of the Crucifixion gives way to the symbolical and doctrinal; and the great attribute of God spreads its luminous field behind the cross on which hangs the dead Saviour. In addition to this, the relation of Christ to the Godhead is set forth by the introduction of the portraiture of God the Father, and the symbol of the Holy Ghost. This treatment, however, does not obtain prior to the thirteenth century, and, indeed, very rarely until the fourteenth century. We give an example (Fig. 16) from the centre compartment of a fourteenth century triptych, preserved in one of the chapels of the cathedral of Naples. Here God the Father, in the form of an aged man, embraces the cross, and breathes His Spirit upon the Saviour. The Holy Ghost, in the form

\* *The History of Our Lord*, vol. i., p. 58.



of a dove, hovers between the heads of God the Father and God the Son. The lenticular aureole, with a plain field, and supported by seraphim, almost entirely encloses the group. Above the nimbus of the Father is the emblem of Christ—the pelican vulning its own breast. D'Agincourt gives another example of this treatment, from a painting by Barnabas de Mutina\* (A. D. 1374), in which the lenticular aureole covered with divergent rays is introduced.

In scenes subsequent to the Crucifixion, figures of Christ are commonly invested with the aureole. In the Resurrection, our Lord is represented ascending from the tomb, invested with the attribute, and bearing in his hand the cross and banner of victory, as in the painting by Perugino, in the Vatican.

The next great event which art records, and in which the aureole almost invariably appears in mediæval works, is the Ascension. It is occasionally met with in subjects representing the appearance of our Lord to His disciples, as in the incredulity of St. Thomas, in the *Benedictional* of St. Æthelwold, where Christ is depicted in a lenticular aureole, invested with the tri-radiated nimbus, and carrying the cross of the Resurrection. The lower part of this aureole, showing the bow supporting the feet, is given in Fig. 6.

From the same superb manuscript, we have given, in Fig. 5, the drawing of Christ invested with the aureole, as presented by the fine miniature of the Ascension. We have already directed attention to the peculiar treatment of this aureole, which has evidently been adopted by the limner with the view of showing that the attribute is behind and following the figure. In the fresco of the Ascension by Giotto, in the chapel of the Arena, at Padua (now almost entirely effaced), the figure of our Lord is depicted more fully in side view than that in the *Benedictional*, but no attempt has been made to represent the aureole in perspective; it spreads its elliptical and many-rayed field on the off side of the figure, almost entirely surrounding its outlines.

The aureole in the Ascension is frequently borne upwards by angels, as in Fig. 4; this treatment imparts to it a very material character, at variance with a true and generally accepted nature.† It is usually met with in Italian art. In the painting by Perugino (1495), preserved in the museum of Lyons, angels surround but do not support the aureole; and

\* *History of Art by its Monuments*. Painting, pl. 133.

† "It would seem as if the words, 'He was taken up,' were, as time progressed, interpreted to mean the interposition of angels and help of heavenly machinery. Christ no longer takes personal part in the act of movement, but, by the 12th and 13th centuries, appears seated passively in the mandorla" (almond-shaped aureole), "which is carried along by the sole agency of angels. Here, therefore, the main and actual idea of the Ascension is sacrificed. The glory in which the Lord sits is held by angels like a *tableau* presented to the view of those below, whom He is blessing from that height; but there is no sign that He is receding from them. It is a more sumptuous composition than that of a single figure rising through the air, but is not so impressive, and was probably derived from the stage machinery of sacred plays."—*The History of Our Lord*, vol. ii., p. 308.

around its broad border are thirteen heads with six wings each, probably intended for seraphim. The figure stands facing the spectator, and the aureole occupies its normal position, enveloping it in a field of splendour. The tradition of early art has, so far as the nimbus is concerned, disappeared; it is here represented as a ring hovering over the head of our Lord.

Christ has gone up, He is throned in the glory of heaven, never to be seen by man until His second coming; but Christian art could not rest satisfied with the representation of His ascension. Inspired by the wonderful passages of St. John's vision, it early sought to depict "Christ in glory" and "the Majesty" of His return to judge the world. Of the modes adopted by Christian artists to depict the glory of Christ with all its surroundings, we shall treat in our article *Glory*, where we shall also allude to the Majesty of the final judgment-day. Here we must confine ourselves to the strictly iconographic glory, as defined in the opening paragraphs of this article.

Christ is no longer in the flesh, although retaining to the eyes of faith His earthly body and the marks of the nails and spear: He is God the Son, seated in the glory of the Father, one with Him and the Holy Spirit for ever. Now comes the aureole into full significance, as the attribute of the Deity; as the visible exponent of that radiance, to which sunshine is as darkness, and which even the words of revelation, in borrowing earthly similes, convey but an imperfect idea to the mind. The aureole, in its simple expressiveness, tells us of the never-fading radiance issuing from the throne of God; and seeks, by a literal translation of the vision of St. John, to concentrate the mysteries of heaven around the person of the throned One.\*

The iconographic glory presents Christ, robed in white garments, wrought with golden embroidery, and studded with jewels, and clasped with a precious morse; His head invested with a nimbus of gold, on which are the three rays indicative of the Triune; seated on a throne or on a rainbow "in sight like unto an emerald;" bearing in His hand the sceptre or orb of sovereignty; and enclosed in an aureole, fielded with vivid rays or powdered with stars of gold, and surrounded with a cordon of seraphim and cherubim.

The lamb, as the great symbol of our Lord, is frequently found in mediæval works invested with the aureole, generally of a circular form, as in the miniature of the triumph of the Lamb in the evangelarium illuminated for Charles the Bald, and the attribute in the hands of a statue of St. John the Baptist in the north porch of Chartres cathedral. (See Fig. 2, in article *Attributes*.)

Representations of God the Father, in the human form, are rare in comparison with those of God the Son; although artists after the twelfth century threw aside the considerations which induced those of earlier

\* See article *Apocalypse*, Subjects i. and ii.



centuries to refrain from attempting portraiture of the Invisible God.\* When invested with the aureole, the attribute differs in no way from that applied to the portraiture of our Lord; indeed, the resemblance in the treatment of the portraiture, and the exact similarity of the aureoles, render it sometimes a difficult matter to decide which of the two Personages is intended. If the reader will refer to Fig. 3, he will there find a portraiture, which, unless some clear indication to the contrary were furnished, would naturally be accepted as that of Christ. The proof that such is not the case is supplied by the miniature from which the illustration is taken. It represents our Lord invested with the tri-radiated nimbus only, showing the bleeding wounds of His crucifixion to the Father, Who appears, seated in the aureole, blessing the Son. Both God the Father and the Saviour are invested with similar nimbi which indicate relation to the Trinity. The tri-radiated nimbus is common to all the Persons of the Godhead, and also to Their symbols; and, accordingly, does not serve as a distinguishing mark for any one Person. Had the three rays any connexion with the cross, as has been popularly supposed, artists would have confined the nimbus so marked to Christ; and it would have invariably been His special attribute as the insignia of His passion. (See *Nimbus*.)

We have not been able to find any art work in which a portraiture of God the Holy Ghost is represented, invested with a special aureole; indeed, separate portraitures are not known to have ever obtained. The symbol of the Holy Spirit—the dove—is, on the contrary, of constant occurrence in all departments of Christian art. It is introduced without either a nimbus or aureole; with the tri-radiated nimbus only; with an aureole only; and sometimes in glory, with both the nimbus and aureole. In Fig. 18, the dove is without a nimbus, but the great aureole encloses it as well as the figures of God the Father and the Saviour.† In the miniature of the baptism of Christ, in St. Æthelwold's benedictional, the dove is neither invested with a nimbus nor aureole; whilst in that of the descent of the Holy Ghost, it has the lenticular aureole only. (See article *Dove*, where drawings of the latter and other examples are given.)

In representations of the Trinity, the dove is sometimes invested with

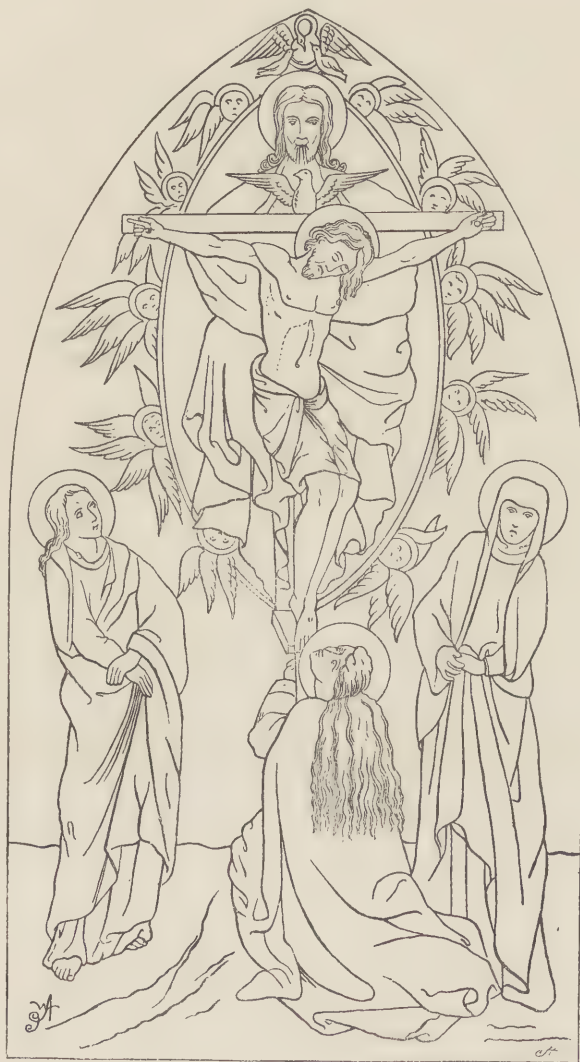
\* "It is somewhat difficult to ascribe a satisfactory reason why personal representations of the Deity were entirely eschewed for so long a period, to become so prevalent during a later; the most likely one appears to be that they were shunned by the early Christians through a praiseworthy and proper feeling of fear and reverence. Truly, it is vain for man to essay to depict the Invisible God, or give form and features to His Awful Presence.

"In portraitures, God usually appears as an aged, but not infirm, man of august and venerable countenance, and generally wears a beard and long hair. His head is always invested with a circular tri-radiated, triangular, or lozenge-shaped nimbus. He is also represented as a King, and wears a crown as well as a nimbus; and as a Pope—in this case He is richly habited in the papal robes, and wears a tiara encircled either with three or five royal crowns."—W. & G. A., *Handbook of Christian Symbolism*.

† The dove in this case should have been invested with the tri-radiated nimbus; and the portraitures should have had the tri-radiated nimbus instead of the plain one. This subject is accordingly iconographically incorrect.



the aureole, whilst the portraitures have the nimbus only. M. Didron gives an example of this treatment, from a fresco, at Mount Athos.\* We give,



in Fig. 19, a very curious rendering of the Trinity, showing the combination of three aureoles of circular form. This is taken from an engraving given by S. d'Agincourt, copied from a distemper painting on wood in his own possession, and by him attributed to the fourteenth century. In the greater aureole, a youthful figure of Christ is seated on the wings of

\* *Iconographie Chrétienne*, Fig. 21, p. 61.

seraphim, holding in one hand an open scroll, and in the other the combined symbols of the four Evangelists. His head is invested with the Greek tri-radiated nimbus. The field of the aureole is divided into zones, rayed, and powdered with stars. Above the head of Christ appears the symbol of the Holy Ghost, invested with a plain nimbus and plain circular



aureole. Higher still, is a half-length portraiture of God the Father, a venerable figure, invested with a circular aureole, smaller, but treated similarly to that of Christ. This is a remarkably interesting example; and is probably unique as regards the combination or superimposition of the aureoles. (See article *Trinity*.)

The only other personage on whom mediæval artists have considered it correct to bestow the aureole, is the Virgin Mary, as queen of heaven. According to strict iconography, such an application is incorrect, but it is quite easy to understand the arguments which obtained, in the Latin Church, in favour of the adoption of the recognised insignia of deification, power, and glory, in connexion with her portraitures. In subjects where the Saviour is also depicted, she is seldom invested with the aureole; a

notable exception to this general rule is furnished by the Last Judgment, by Orcagna, in the Campo Santa, at Pisa. In this fresco both Christ and the Virgin are represented, side by side, in large lenticular aureoles, exactly similar in dimensions and artistic treatment. An outline drawing of the figure of the Virgin is given in the accompanying illustration



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(Fig. 20). Neither of the figures are invested with the nimbus proper, its place being taken by a diffused radiation formed of divergent lines of light which extend beyond the confines of the aureole. The figures are seated on bows which span the fields of the aureoles, whilst their feet rest on clouds.

In the fresco (A.D. 1230) of the assumption of the Virgin, by Giunta di Pisa, in the church of St. Francesco, at Assisi, one broad lenticular aureole surrounds both the figures of our Lord and the Virgin. They are seated together, with their feet resting on a bow which spans the lower part of the



aureole. The attribute is borne aloft by four angels, in a manner similar to that shown in Fig. 4. In certain pictures of the Assumption, as in those of Perugino and Pinturicchio, the aureoles which invest the figures of the Virgin are surrounded with cordons of angels.

Of the aureoles of the higher angels we have already spoken; and it only remains for us to say a few words upon the application of the attribute to the representation of the human soul. The instances of the latter are rare, as might be expected, for in them the artist strained the rules of iconography much beyond their proper bounds. When they are met with, we may justly accept their signification as different from the aureoles of divine personages or symbols. Such an aureole as that surrounding the soul of St. Martin (Fig. 1); and the one, very similar in treatment, which surrounds the soul of St. Margaret, in the window which contains her legendary history, in the cathedral of Auxerre, may be understood to represent the way of light, the radiant clouds amidst which the souls of the saints are carried to heaven. The aureole of St. Margaret has, like that of St. Martin, a margin of clouds; and is borne aloft by angels.

Aureoles have sometimes been applied to the symbols of the Evangelists, as in Fig. 15. For other examples, see articles *Book* and *Evangelists*, *Symbols of*.

Several modern authors appear to prefer the term *AUREOLA* to that of *AUREOLE*, but we are of opinion that considerable confusion will be avoided by the systematic use of the latter term, with the signification given in the present article. We have seen that Ducange uses the former term for some undescribed object, and also for the nimbus; his authority rather supports our argument in favour of the disuse of the word, especially as the term *aureole* does not allude to the nimbus proper.

The *Diversarum Artium Schemata*, of Theophilus, furnishes another argument in favour of the systematic use of the term *aureole*, for the great attribute of divinity. In that valuable work, we find the term *aureola* employed with a signification widely different from those of Ducange and modern writers. We here give the Latin text of chapter xxix., Book 1, in which the word occurs:—

“DE PICTURA TRANSLUCIDA. Fit etiam pictura in ligno, quæ dicitur translucida, et apud quosdam vocatur *aureola*, quam hoc modo compones. Tolle petulam stagni non linitam glutine nec coloratam croco, sed ita simplicem et diligenter politam, et inde cooperies locum, quem ita pingere volueris. Deinde tere colores imponendos diligentissime oleo lini, ac valde tenues trahe eos cum pincello, sicque permitte siccari.”\*

\* “A picture is likewise made upon wood, which picture is called transparent, and after some it is called *aureola*, which you compose in this manner. Take tin leaf, not covered with varnish nor coloured with saffron, but simply as it is, and diligently polished, and with it you cover the place on which you wish thus to paint. Then grind the colours to be laid on most carefully with linseed oil, and when very fine, lay them on with a pencil, and so allow them to dry.”—Hendrie's translation.

In the Table of Synonymes, in the manuscripts of Jehan le Begue, we find the term thus explained:—" *Aureola* est color qui aliter pictura translucida vocatur; et omnis pictura, cujuslibet coloris, in stanno attenuato facta, si ipsa liniatur, per eam transparet, et pulchra fit, precipue si in stanno tenuato polito sit." There is a slight difference between the use of the term by Theophilus and Le Begue; one uses it for a transparent picture, and the other for the transparent colour or lacquer which is applied to the polished tin. The *aureola* of the Table of Synonymes is evidently the same material as the *auripentrum* of the same manuscript and the *auripetrum* of Petrus de St. Audemar and Eraclius. (See article *Auripetrum*.)

There is no doubt the term, aureola, was applied to this kind of transparent painting on account of its luminous appearance when viewed in sunshine or strong artificial light. Such a system of painting would produce, though in a very inferior degree, the glittering effect of the translucent enamels fabricated by the goldsmiths of the fourteenth and fifteenth centuries.

**AURICALCUM.** According to Theophilus, the late Latin name for a very pure brass, prepared from refined copper and zinc, and employed for the construction of objects which had to be gilded. After giving directions for the purification of the copper, he adds:—"From this copper you can work whatever you may wish to make, for gilding, in ductile work, in figures and animals and birds, in censers and different vases, in borders of tablets, in wires and chains. Make *auricalcum* from this copper with the addition of calamine,<sup>1</sup> in the same manner as you have composed the brass of caldrons above. When you have recooked this four or five times in small vessels placed in the furnace, whatever you have cast from it in a variety of divers work, you can gild in the best manner."<sup>2</sup>

**AURIFICINA.** The late Latin term for a workshop in which gold is smelted and wrought.<sup>3</sup>

**AURIFILUM.** The late Latin term for the threads of gold so largely employed during the middle ages in embroidery, and in those precious

<sup>1</sup> Calamine, or cadmia, of the ancients, is calcined zinc ore. Theophilus says:—"A kind of stone is also found of a yellowish colour, and sometimes red, which is called *calamine*, which is not broken up, but as it is dug up it is placed upon wood, heaped up and very glowing, and is burned until it quite glows. This stone, afterwards cooled and broken very small, is mixed with coals finely divided, and is mingled with the above-mentioned copper in the furnace."—*Diversarum Artium Scheda*, Hendrie's translation.—Book iii., cap. 63.

<sup>2</sup> *Ibid.*, Book iii., cap. 67.

<sup>3</sup> "AURIFICINA, Fabrica Aurificum, Aurificium, ipsum opus & exercitium, quod fit in auro, Ugutiani. Glossar. Lat. Græc. *Aurificina*, χρυσόχοειον. Ebrardus in Græcismo:

*Aurificina*, locus in quo faber excoquit aurum."

Ducange. *Glossarium*.



products of the loom which were so highly prized by sovereigns and the church for state robes and vestments.<sup>1</sup> Whether the term had a general signification, and embraced all the varieties of thread gold, from the flat filiments of the pure metal, which were often used in early ages for funeral and state garments, to the less costly but more glittering material, formed of a filmy strip of the metal (or of silver or copper gilt) wound spirally round a silken thread, and producing the effect of a burnished wire, it is difficult to decide. We are of opinion it applied only to the more ancient and genuine material—gold in the shape of very fine flat filiments, such as formed the shrouds of the prefect Probus Anicius and his wife, and of the queen of the Emperor Honorius;<sup>2</sup> and such as doubtless were used in the embroidery of the two amices which belonged to the cathedral of St. Paul, London, at the end of the thirteenth century, and which are thus alluded to in Dugdale's *Monasticon*:—"Amictus breudatus de auro puro; amictus vetus breudatus cum auro puro." It will be observed in our note from the *Glossarium*, that other vestments which belonged to the same cathedral are spoken of, and in connexion with which the present term is used.

**AURIGRAPHIA.** The term applied during the middle ages to the golden writing, or the art of writing with gold, frequently employed in the production of copies of the holy Gospels and other precious books.<sup>3</sup>

Writing in gold and silver appears to have been largely practised during the eight centuries between the third and the eleventh, and to have reached its greatest perfection during the eighth and two following centuries.<sup>4</sup> Several remarkable examples, of different dates, have fortunately been preserved; and to these we may briefly allude.

<sup>1</sup> "AURIFILUM, Filum aureum, *Fil d'or*. Visitatio Thesaurariæ S. Pauli Londinensis an. 1295. *Cum arboribus & avibus diasperatis, quarum capita, pectora, & pedes, & flores in medio arborum, sunt de Aurifilo contexta. Alibi: Duo amictus de filo Aureo, aliquantulum lati & plani.*"—Ducange. *Glossarium*.

<sup>2</sup> "In making the foundations for the new St. Peter's, at Rome, they came upon and looked into the marble sarcophagus in which had been buried Probus Anicius, prefect of the Pretorian, and his wife, Proba Faltonia, each of whose bodies was wrapped in a winding-sheet woven of pure gold strips. Maria Stilicho's daughter was wedded to the Emperor Honorius, and died sometime about A.D. 400. When her grave was opened, A.D. 1544, the golden tissues in which her body had been shrouded were taken out and melted, when the yield of precious metal amounted to thirty-six pounds."—Dr. Rock. *Textile Fabrics*. Lond., 1870.

<sup>3</sup> "AURIGRAPHIA, *Aurea scriptura, unde Aurigraphus qui auream scripturam facit*. Gloss. MSS. Montis S. Eligii Atebat."—Ducange. *Glossarium*.

<sup>4</sup> "It was the custom of the Greeks and Romans, during the early ages of Christianity, to write their most valued productions in letters of gold and silver, and upon vellum stained with purple, or some analagous colour. That in these early times the sacred Scriptures should in this manner have been especially illustrated, affords the strongest proof of the high degree of respect with which they were regarded. Thus, the bishop and martyr Boniface, in his 28th Epistle, entreats the abbess Eadburga to write the Epistles of St. Peter in letters of gold, for the greater reverence to be paid to the sacred writings, and Mabillon informs us that it was only for princes and nobles that such manuscripts were rarely written; whilst in the *Spicilegium* of Theonas, we are informed that it was rather unseemly to write in this manner, unless at the particular desire of a prince."—*Palæographia Sacra Pictoria*. Lond., 1845.



Golden writing was applied to both stained and white vellum; but silver writing was exclusively confined to violet, purple, or rose-coloured vellum, upon which it distinctly showed itself. Manuscripts written with silver were accordingly known as "*Codices purpureo-argentei*." Certain manuscripts contained both gold and silver writing, as in the case of the celebrated volume, known as the *Codex Argenteus of Ulphilus*, preserved in the Royal Library at Upsal. It is nearly a complete copy of the Gospels, written in gold and silver letters on about one hundred and sixty leaves of violet-coloured vellum. It is written throughout in large uncial letters. This valuable specimen of caligraphy was executed about the year A.D. 360.

The *Codex Vindobonensis Geneseos*, preserved in the Imperial Library, at Vienna, is a manuscript consisting of twenty-six leaves, on which the text is written for the most part in gold and silver. Another valuable example of this regal style of writing exists in the manuscript known as the Psalter of Saint Germain des Prés, ascribed by M. Champollion Figeac to the sixth century. It is beautifully written with gold on purple vellum. In the Imperial Library, at Vienna, there is a Greek evangelistarium, written towards the end of the eighth century. It is a volume measuring about seven by six inches, with leaves stained a light violet colour, and covered with gold writing in bold round and square Greek uncials.\*

Sir Frederick Madden, in his able Introduction to Shaw's *Illuminated Ornaments*, gives some interesting facts in connexion with aurigraphy. He says:—"The taste for gold and purple manuscripts seems only to have reached England at the close of the seventh century, when Wilfrid, archbishop of York, enriched his church with a copy of the Gospels thus adorned; and it is described by his biographer, Eddius (who lived at that period or shortly after), as '*inauditum ante seculis nostris quoddam miraculum*,'—almost a miracle, and before that time unheard of in this part of the world. But in the 8th and 9th centuries the art of staining the vellum appears to have declined, and the colour is no longer the same bright and beautiful purple, violet, or rose-colour of the preceding centuries. It is rare, also, to meet with a volume stained throughout; the artist contenting himself with colouring a certain portion, such as the title, preface, or canon of the mass. Manuscripts written in letters of gold on white vellum, are chiefly confined to the 8th, 9th, and 10th centuries. Of these, the Bible and Hours of Charles the Bald, preserved in the Royal Library, at Paris, and the Gospels of the Harleian collection, No. 2788, are probably the finest examples extant. In England the art of writing in gold seems to have been but imperfectly understood in early times, and the instances of it very uncommon. Indeed, the only remarkable one that occurs of it is the Charter of King Edgar to the new minster at Winchester, in the year 966. This volume is written throughout in gold."

\* A portion of the MS. is copied in Silvestre's *Paléographie Universelle*, and Westwood's *Paléographie Sacra Pictoria*.

Of the processes employed in preparing the gold and applying it to the vellum little is known beyond what we find in the metrical book of Eraclius. The chapter, or what may more correctly be termed the verse (Lib. i., cap. 7\*), which treats of writing in gold, is copied almost verbatim in the *Diversarum Artium Schemata* of Theophilus (Lib. iii., cap. 96). We here give Mr. Hendrie's translation from the latter work:—

“OF WRITING IN GOLD. Should any one wish to fashion beautiful writing in gold, let him read what I say in lowly verse. Let him grind gold with pure wine until it has become well dissolved; I advise that he should often wash it, for the white page of the book demands this. Let him afterwards make this liquid, with the gluten of bull's skin, or, if he wish, with the gluten of gum. And when he has taken the gold with a stick or pen, let him stir it, should he seek to write beautifully. But after this, when the writing has become dry, let him make it very shining with the tooth of a wild bear.”

Brief as these directions are, they convey a tolerably accurate idea of the ordinary mode, followed during the middle ages, of preparing the writing fluid. The gold to be ground or reduced to minute particles was doubtless first beaten into very thin leaf. In such a condition it could be readily broken up to any degree of fineness. Indeed, in one of the collections of receipts which have been handed down to us, commonly known as the “Brussels Manuscript,” entitled *Recueil des Essais des Merveilles de la Peinture*, by Pierre Lebrun, Painter (1635), we find that leaf gold is mentioned. The receipts for grinding the metal are as follows:—

“A proper quantity of beaten gold or silver is to be spread inside a smooth glass cup, and moistened with clear water. The leaves are then rubbed with the finger, wetting them occasionally, and not spreading them too much while rubbing; this process is continued until all the leaves of gold are well ground, continually adding water. When they are properly ground, the cup must be filled with fresh water and stirred well. The gold is then left for half an hour to settle, after which the water is poured off, and the gold remains at the bottom of the cup. This is dried, and when used is distempered with gum-water. This is the best way of grinding gold.

“To grind fine gold, so that one may paint or write with it with the pencil, you must take gold leaf with four drops of honey, mix the whole together, and put it in a small glass vessel; when wanted for use, it must be distempered with gum-water.” †

The above processes are alike in all essentials; the wine, water, and honey were all used as simple mediums to retain the gold leaf whilst it was being broken up into an impalpable powder. Honey has been preferred in modern times for this purpose, or in the preparation of the material known and sold as “shell gold;” a material identical with the ground gold of the mediæval scribes. The name given, in the “Brussels Manuscript,” to the ground gold is AURUM CONTUSUM.

**AURIPETRUM.** This late Latin term appears to have been used by middle age writers with two widely different significations. According to

\* See Mrs. Merrifield's *Original Treatises on the Arts of Painting*, vol. i., p. 191.

† *Ibid.*, vol. ii., p. 832.



Ducange,\* it was employed to designate a species of mosaic in which gold or gilt metal strips were inserted along with the coloured stones which chiefly composed it; whilst according to the Le Begue manuscripts, it was the term applied to certain yellow transparent varnishes, used for imparting the appearance of gold to polished tin foil. The term in its latter sense was also, and probably more correctly, written AURIPENTRUM.

The etymology of the term, auripetrum, for it is obviously compounded from the Latin words *aurum*, gold, and *petra*, a stone or rock, is strongly in favour of the true signification being given by Ducange. He directs our attention to the tomb of queen Frédégonde, as an example of the species of mosaic called auripetrum; and our readers can easily acquaint themselves with its appearance and characteristics by referring to the carefully rendered chromolithographic plates in Gailhabaud's *L'architecture et les Arts qui en dépendent*. The process employed in the fabrication of the mosaic work of this tomb or slab is extremely simple. Portions of the surface of the stone were abated or sunk with the chisel, and left rough to firmly hold the cement which was afterwards applied. This cement is of a dark brown colour, and was most probably poured into the abated parts in a semi-fluid state. When sufficiently set, thin ribbons of metal, bent into wavy, spiral, and other forms, were pressed down edgewise until about level with the surface of the cement; then irregularly-shaped pieces of stone, marble, etc., of different colours, were pressed into the cement between the metal ribbons, and the work was left until the cement became set and dry. After a sufficient time had elapsed, the whole was ground down to a uniform surface and polished. The edges of the metal ribbons were then in all probability gilt. Of course it was impossible, by means of so rude a process, to produce anything approaching the artistic results obtained by true mosaic work as practised by the Romans, Byzantines, and others; indeed, in this slab nothing beyond the general outlines of a figure was attempted; the face and hands were rendered by plates of metal wrought in very low relief and fixed in slightly abated portions of the slab.

It is highly probable that this species of mosaic was suggested by cloisonné enamel; and was a rude attempt to produce, by means of metal strips and many-coloured stones bedded in cement, something resembling the beautiful results obtained by the vitrified pastes between the metal cloisons. The tomb of Frédégonde was evidently a tentative work; and does not appear to have been copied or improved upon in later times. It was, doubtless, executed during the twelfth century. For further

\* "AURIPETRUM, Aurum petræ inductum, Musivi operis species, Gall. *Ouvrages à la Mosaïque*: cujus habes specimen in tumulo Reginæ Fredegundis in Historia S. Germani à Pratis delineato, atque etiam in sacellis pluribus Monasterii S. Dionysii. Vita S. Irenæi Episc. Lugdun. to. 5. Junii p. 347. *Hic Christi athleta, flos omnium Christi athletarum, in rypta quæ in colle superposito civitati, pulcro & antiquo musivi & Auripetri opere exstructa est, à B. Zacharia Presbytero noctu honorifice est tumulatus.*"—Ducange. *Glossarium*.



particulars we must refer the student to the lengthy description in Gailhabaud's book.<sup>1</sup>

We have now to add a few words with reference to the auripetrum or auripentrum of the manuscripts of Jehan le Begue. In the Table of Synonymes we find the term thus explained:—"Auripentrum est color croceus qui stanno lucido suppositus et linitus speciem arui procul intuentibus mentitur." Here auripentrum is evidently the yellow lacquer or varnish for the preparation of which the manuscripts of Petrus de St. Audemar and Eraclius furnish receipts. The following are Mrs. Merrifield's translations of these:—

"HOW TO MAKE AURIPETRUM.—Spanish saffron, distempered with very clear glue or liquid varnish, and laid over very clear, that is, very bright and well polished tin, assumes the appearance of gold to those that look on it, for it receives its colour from the sun, and its brilliancy from the tin, and thus may be made excellent auripetrum."—*Petrus de St. Audemar*.

"OF AURIPETRUM.—Take oil made from linseed, and put it into a new jar, and take the bark of 'vesprum' very well dried and well ground in a mortar, and let it lie for a night in the oil. The next day boil it as long as you may think proper, but not much, then pass it through a cloth into another jar, and boil it again a little over the fire with myrrh and aloes. Strain it again, and immediately put *vernix* with it, and heat it upon the coals. But if you have no *vernix*, take *glassa*, and put it with the aloes and myrrh instead of *vernix*, and, as I said before, strain it again. If you have not the bark of *vesprum* take dry *incaustum*, or else the bark of black-thorn dried and ground, and, as I said before, boil it with the myrrh and aloes, and afterwards remove it from the fire, and when it is cold, put it away in a vase to preserve as long as you like. You must collect the bark in March or April, and dry it in May, and keep it as long you like."—*Eraclius*.

The practice of using tinfoil, varnished with a bright yellow transparent preparation to imitate gold, does not appear to have been uncommon during the middle ages. The persons for whom paintings were executed, if wealthy, supplied the artists with gold leaf; but when they had to study economy, they furnished tinfoil instead. Occasionally both gold leaf and its substitute were used on the same work. In the document recording the expense of painting the chapel of St. Jacopo di Pistoia,<sup>2</sup> 7000 leaves of gold and 37 pieces of tin are mentioned. Theophilus (Lib. i, caps. 26 and 32) gives directions for preparing the tin leaf and staining it to imitate gold; and how to ornament pictures in books with tin and saffron.

**AURIPHRYGIUM OR AURIFRIGIUM.** (*Late Lat.*) Embroidery, executed with gold threads or filaments, which was largely used during the middle ages for the adornment of ecclesiastical vestments.<sup>3</sup> From this term the old English word "orphrey" is derived.

<sup>1</sup> Vol. iii., Art. *Dalles Tumulaires*.

<sup>2</sup> Ciampi, *Notizie*, &c., p. 145.

<sup>3</sup> AURIFRIGIA, AURIFRISIA, AURIFRISUM, Fimbria aurea, limbus aureus. Gall. *Frangé d'or*: neque enim hisce vocabulis intelligitur opus Phrygium auratis filis intextum, quod

Richly embroidered cloths were used by the ancient Romans; and the garments made of them were termed *Phrygionic*, from the fact that the art of embroidering them by the needle was understood to have originated with the Phrygians. Pliny says:—"Pictas vestes jam apud Homerum fuisse unde triumphales natæ. Acu facere id, Phryges invenerunt ideoque Phrygionæ appellatæ sunt."\* An embroiderer was called a Phrygian (*Phrygio*) from the same cause; and embroidery executed by the needle was designated Phrygian work (*opus Phrygium*); and, accordingly, when the ornamentation was wrought with gold threads or minute strips of pure gold, it was designated *auriphrigium*. For further remarks on this description of work see article *Orphrey*.

In middle age writings the term is found in the following forms:—*AURIFRASIUM*, *AURIFRISIUM*, *AURIFRISUM*, and *AURIPHRIGIUM*.

**AURIPIGMENTUM.** The term used by Latin writers for a yellow pigment prepared from native sulphuret of arsenic—the pigment now known as orpiment. (See *Orpiment*.)

**AURORA.** In classic mythology the goddess of the dawn or daylight. (See *Eos*.)

**AUSTER.** (*Lat.*) In classic mythology the God or Genius of the South wind. He is represented, in the sculptures of the octagonal tower of Andronicus Cyrrhestes, or "Tower of the Winds," at Athens, by the figure of a young man, emptying downwards a jar of water. The figure is winged, and wears a light and flowing garment which leaves his chest and limbs partly exposed. The vase of water and this light attire evidently express the very wet and sultry disposition of the south wind. Above the figure is inscribed the Greek name ΝΟΤΟΣ.

**AVENTURINE.** A glass of a light transparent brown tint, interspersed with minute glistening scales, resembling particles of gold leaf. This peculiar material was originally produced by the glass makers of

volunt viri docti. Chronicon Laurishamense, pag. 95. *Cappæ tres cum Aurifrigiis, palla altaris cum Aurifrigio, &c.*

"Quod vero Latini sequioris ævi Scripores *Aurifrisium* vocant, nostri & Angli *Orfroy* dixerunt. Vetus Vocabularium Anglicum, *Orfroy of a vestment, Aurifrigium*.

"*Aurifrigium* fere semper accipiendum pro Limbo acu picto, auro plerumque argentore distincto, qui ad vestes sacras assuitur, atque, ut supra, à nostris *Orfroy* appellari solet. Cappas fere omnes latum ambit *Auriphrigium*, casulis in crucis modum aptatur, ab humeris ante & retro demittitur in tunicis; at in albis consuitur tantum ante & retro inferiorem oram, & in extrema manicarum parte, in amictu vero qua parte capiti imponitur. Qui usus etiamnum obtinet in plerisque Ecclesiis. Spicil. Acher. to. 7. p. 403. in Instrumento anni 1099. *Ad Missæ suæ ornamentum reponendum scriniola duo tali opere convenientia fecit, suoque studio amictum magno Aurifrigio & longo ornatum, albamque . . . acquisivit,*" &c.—Ducange. *Glossarium*.

\* Pliny, lib. viii., cap. 47.

Murano, and used by them in the fabrication of their highly prized and artistic wares. Along with many of the processes followed by the Venetian artists, that by which aventurine was made was kept a profound secret. It is now largely used in the modern works at Murano, and is in all probability made according to the ancient receipt still in the possession of the members of the guild of that noted island. It is generally understood that the scales are of copper. Fairholt informs us that "French chemists have succeeded in preparing this glass by fusing together for twelve hours a mixture of 300 parts of pounded glass, 40 parts of copper scales, and 80 parts of iron scales; afterwards cooling the mixture slowly."

**AVIARY OR AVIARIUM.** A building constructed by the ancients for the purpose of keeping rare and beautiful birds, or for breeding, rearing and keeping birds intended for food. The Roman avarium, for the latter purpose, was usually a building with high walls, roofed over, surrounded inside with many tiers of roosting places, and lighted and ventilated by numerous small openings. Attached to this main portion were rooms where the food was stored and prepared as required, and where the fattened birds were killed or cooped for market. Elmes informs us that "Varro, in the third chapter of the third book of his work entitled '*De Re rustica*,' says, that his ancestors knew no other birds than fowls and pigeons, which were kept in a court yard; but in his time they built aviaries, to which they gave the Greek name of *ἀρνιθῶν*, which were more extensive than even the dwelling houses of former times. He also relates, in the following chapter, that in his days there were two sorts of aviaries, one for containing birds intended for the table, and the other the birds which were kept for their song or plumage. The former sort, like the modern dove-cote, were built entirely for use, but the latter were often beautiful pavilions, with an apartment or saloon in the centre, for the company to sit in and enjoy the melody of the feathered songsters. Lænius Strabo, an opulent and luxurious Roman, is looked upon as the first who introduced aviaries upon an extensive scale, and erected a splendid one at his villa near Brundisium. Lucullus followed this example, and constructed one at his Tusculanum, which far surpassed the former in size and beauty. Varro, however, outshone them both in his ornithological buildings, and built an elegant and spacious aviary at his country house, near Casinum, which he has described ('*De Re rustica*,' lib. iii., c. v.), with evident satisfaction. Castell (in his '*Villas of the Ancients Illustrated*,' p. 19), and other authors have endeavoured to throw light upon, and even to delineate, this splendid structure. I. A. de Segner has devoted an entire work ('*de Ornithone Varronis*') to it, and Goiffon has also published '*Observations sur la Volière de Varron*.' Both these tracts are reprinted in Schneider's Commentary upon the first volume of '*Scriptores Rei rusticæ*.' Schneider did not publish the engravings of Segner's work, which, however, were republished in Gesner's edition of the '*Scriptores Rei rusticæ*,' Leips. 1773; to which Gesner has added a plate of his own conceptions of this celebrated aviary of Varro. In the '*Recueil de Mémoires concernant*



*l'Architecture, pour l'Année 1800,* is a letter from M. Rode to M. Hirt on the occasion of a publication by the latter, entitled '*Une Dissertation sur la Volière de Varro à Casinum,*' and M. Hirt's reply, which throw considerable light upon the subject. M. Steiglitz, a German archæologist of great attainments, has also given a dissertation and description of his ideas upon the same structure in the third volume of his '*Archæologie de l'Architecture des Grecs et des Romains.*'"\*

Several important aviaries have been erected in modern times. Elmes mentions one at Woburn Abbey, a seat of the Duke of Bedford, as of great extent and value; another at Goodwood, near Chichester, which was spacious and elegant. At Malmaison, one of Napoleon's palaces, a very fine aviary was constructed, the idea for which is said to have been taken from a painting at Herculaneum.

The principal aviaries now in existence are those of the Jardin des Plantes, at Paris, which, according to the numbering of 1875, contained about twenty thousand birds of all species; and those of the Zoological Gardens, at London.

Aviaries for birds accustomed to the climate of the country are usually enclosed with wire network, being partially protected from the weather by a wall on the north or north-east, and by a projecting roof, partly or entirely glazed, with wire netting underneath to prevent the glass from being broken by the birds. Birds which require to be more carefully protected are enclosed in aviaries glazed on all the exposed sides, save that towards the south. Aviaries for humming-birds and the other tender tropical species are, as in the case of those in the Jardin des Plantes, properly constructed as spacious cages, of wire netting, enclosed in large houses, well lighted, ventilated, and artificially heated by hot water pipes. A broad passage round the cages allows the birds to be viewed. Many-branched dead trees are placed inside the aviaries for the birds to perch upon. Roosting and feeding places are provided in all aviaries; the latter are sometimes situated underneath the visible floor, an arrangement to secure cleanliness in the portions exposed to view. The supports, framing, and roofs are generally made as light as possible, and ornamentally treated.

**AVOLTA.** The late Latin name for a vault, or a place covered with a vault. †

**AXE.** In Christian art, an attribute of St. Matthias, apostle and martyr. St. Matthias taught the gospel in Judæa and Cappadocia, and received the crown of martyrdom at Colchis, about the year A.D. 64.

\* *General and Bibliographical Dictionary of the Fine Arts.* Lond., 1826.

† "AVOLTA, Gall. *Voute*, *Concameratio*, *tholus*. Matth. Paris in *Vitis Abbatum S. Albani*: *Eadem quoque Capella in arduum surgens super eam crepidinem, quæ vulgariter Avolta dicitur, dormitorii diminutionem supplet & defectum.* Quo loco auctor male utitur voce crepidinis, pro concameratione."—Ducange. *Glossarium*.

There are different opinions as to the manner of his death. According to Greek authorities he was crucified, whilst according to Latin legends he was killed with an axe or spear. In German art his attribute is commonly the axe. In Italian representations he generally carries a spear. The axe is also, although rarely, introduced as an attribute in portraits of St. Matthew, evangelist and martyr; along with an oak tree, St. Boniface, bishop and martyr; fixed in his head, St. Josaphat, bishop and martyr; held in the hand, St. John Damascen, confessor; St. Rufus, bishop and martyr; and SS. Martian and Malchus, two of the Seven Sleepers, martyrs.

**AXIS.** In architectural terminology, the term commonly used to designate the central line of a design; the line which, as in conic sections, divides a geometrical figure into two equal parts, and cuts all its ordinates at right angles, dividing them into equal lengths; the line drawn either vertically or horizontally through the eye of the Ionic volute. The axis may be spiral, as in the case of a twisted column spirally drawn.<sup>1</sup>

**AYMELLUM.** The late Latin term for the vitreous paste or enamel used by the mediæval artists; from which the old English terms *AMELL* or *AMMEL* were probably derived.<sup>2</sup> Enamelled work was termed *AYMELLATUS*; <sup>3</sup> and the enameller was called *AYMELATOR* or *AYMOLATOR*.<sup>4</sup>

**AZURE.** The heraldic term for blue. This tincture is represented in sculpture and engraving, by parallel lines drawn horizontally across the shield, as in Fig. 1; and accordingly in the same direction upon any ordinary or charge, as in Fig. 2. (Example—*Argent, a chevron, Azure.*)

Simply as a colour, azure is commonly understood to resemble the deep pure blue of the sky, such as is seen in Italy on a cloudless day.

"But Fame, with golden wings, aloft doth flie,  
Above the reach of ruinous decay,  
And with brave plumes doth beate the *azure* skie."

Spenser's *Ruins of Time*.

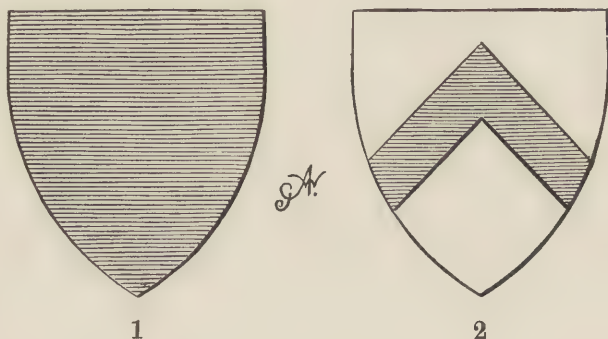
<sup>1</sup> "AXIS. This word, sometimes found written in Latin authors for *ASSER* and *ASSIS*, is used by Vitruvius, iii., 3, apparently for the thickness of the thinnest portion of the pillow of the volute in the Ionic order, where he states that the axes are not to be thicker than the eye of the volute, though most commentators have translated it as the fillet of the volute. The term is also employed by Vitruvius, iv., 2, for a joist: and it has been translated by Rich, *Illustrated Companion*, 8vo., London, 1849, with great plausibility, as the hanging style of a door, in explanation of Statius, *Theb.*, i., 349, 'axemque emoto cardine vellunt.'—*Dict. of Arch.*, Arch. Pub. Soc., Lond.

<sup>2</sup> "AYMELLUM, Encaustum, Latino-barbare smaltum, Gall. *Email*, Angl. *Amell*, & *Ammel*. *Unum ciphum argenteum* . . . cum diversis scuchonibus & *Aymellis*, apud Rymerum to. 5. pag. 49."—Ducange. *Glossarium*.

<sup>3</sup> "AYMELLATUS, Encausto pictus, Gall. *Emaillé*, apud eundem Rymer. to. 5. pag. 48. & 59."—*Ibid*.

<sup>4</sup> "AYMOLATOR, pro *Aymelator*, ut videtur, Gall. *Emaillieur*. Vide supra *Aymellum*. Lit. remiss. an. 1355. in Reg. 84. Chartoph. reg. ch. 477. Cū Johannes Arrondeau invenisset Johannem Gerry *Aymolotorem*, &c."—*Glossarium Novum, Supplementum*.

Although the term has frequently been applied to the more beautiful blue pigments, it cannot be understood to be appropriately confined to any.



Ultramarine has been termed azurine and azure; and both cobalt blue and smalt have been designated azure.

During the middle ages there were several blue pigments to which the term AZZURRO was affixed. AZZURRO DI SMALTO, according to Borghini, was a blue glass (or smalt) used in fresco painting. AZZURRO DELLA MAGNA, AZZURRO TODESCO, AZZURRO SPAGNUOLO, AZZURRO DI LOMBARDIA, and AZZURRO DI ANGLIA appear, from middle age writers on art, to have all been pigments prepared from varieties of the native blue ore of copper. And others, termed AZZURRO DI TERRA, AZZURRO DI VENA NATURALE, and CENERE AZZURRE, were prepared from carbonate of copper. The AZZURRO DI BIADETTO, of Borghini and Baldinucci was evidently an artificial blue prepared from copper; and did not rank so high in the estimation of artists as the natural pigments previously mentioned. Azzurro della Magna was the most highly valued. For full particulars in connexion with all these pigments the student should consult Mrs. Merrifield's valuable works:—*Original Treatises on the Art of Painting*, etc., vol. i., p. cxcvi.—ccxvi.; and *The Art of Fresco Painting*, p. xxxiv.—li.



## B

**BABYLONIAN ARCHITECTURE.** Almost all that relates to the architecture of Babylon is a matter of conjecture; for, on account of the perishable nature of much of the building materials employed, all the great structures which adorned that vast and wealthy city have crumbled into shapeless mounds. Excavations made in these mounds have revealed very little; fragments of brick walls, bricks stamped with the name of Nebuchadnezzar, by whom the city was rebuilt, and a few other fragments of building materials are all that have been brought to light.

All researches tend to prove that Babylonian buildings differed from those of Assyria in so much as little or no stone-work was employed in their construction. Of such wall-slabs and mighty animal sculptures as were found in Assyria, and which were the sole means of preserving the forms and disposition of its palaces to our day, not a single trace has been yet discovered in the Babylonian mounds. A few standing stones would have done much to give us a clue to style and extent, but these have been sought for in vain.

It is probable that the city, as built by Nebuchadnezzar (about B.C. 600), resembled in general plan the city of Nineveh; indeed, such may be gathered from the descriptions of Herodotus and Diodorus Siculus. The latter particularly speaks of two fortified palaces. The city was, according to Herodotus, a perfect square surrounded by fortified walls one hundred and twenty stadia long on each side; making a total circuit of four hundred and eighty stadia, or nearly sixty miles. Strabo and Diodorus Siculus state the circuit to have been three hundred and eighty-five and three hundred and sixty stadia.\* Within these walls the city is believed to have been divided into a number of equal squares, with the great thoroughfares passing between them. All trace of these divisions and the fortified walls have disappeared. Ancient writers inform us that the river Euphrates ran through the city, dividing it into two parts; and Herodotus states that in the centre of each of these divisions was a circular space surrounded by a lofty wall, one containing the temple of Belus, and the other the royal palace. In various parts of the city rose fortified enclosures, containing palaces and temples, with their surrounding buildings, court-yards, and hanging-gardens.

\* *Nineveh and Babylon*, p. 492.

Speaking of the walls of Babylon, Mr. Layard remarks :—" It must not be forgotten that the outer walls of Nineveh as well as those of Babylon have entirely disappeared. Are we to suppose that the historians in their descriptions confounded them with those surrounding the temples and palaces ; and that these exterior fortifications were mere ramparts of mud and brushwood, such as are still raised round modern Eastern cities ? Such defences, when once neglected, would soon fall to dust, and leave no traces behind. I confess that I can see no other way of accounting for the entire disappearance of these exterior walls." As descriptions of the ruins, or, more correctly speaking, the mounds of Babylon, have been given by Rich, Major Rennell, Colonel Rawlinson, and others, and as they do not directly bear upon any questions of art architecture, it is unnecessary for us to describe them, or quote from the writings of these gentlemen.

In the neighbourhood of the site of the city are two remains of buildings, the original nature and uses of which have puzzled investigators. One is commonly known as the Kasr, called by the Arabs the Mujelibé, a mass of brickwork rising from an extensive mound on the east bank of the Euphrates. The other is known as Birs Nimroud, situated a few miles westward. From the remains of the former little can be gathered as to the extent of the building. Alluding to these ruins, Mr. Layard says :—" The only remains of building not covered by soil and sand, but still standing above ground, on the site of Babylon, and part of the ancient city, are about one mile to the south of the mound last described.\* It is the Kasr, or Palace, of Rich, a name by which it is now generally known to travellers, but the Arabs call it the Mujelibé, or the 'overturned.' It rises on the

\* The mound alluded to is that called "Babel," in which both Mr. Rich and Mr. Layard made extensive excavations. Mr. Layard remarks with reference to his own undertaking :—" The first trenches were opened in the great mound of Babel, about five miles from the gate of Hillah, and three quarters of a mile from the river. I sought the subterranean passage opened and described by Mr. Rich, and on removing the rubbish I soon came to 'the quadrangular funnel, about thirteen feet square, of burnt brick and bitumen,' which he had discovered. After the lapse of forty years, it had been once more completely filled with earth. The workmen again entered the underground chamber in which Mr. Rich found a coffin of wood, containing a skeleton still well preserved. The entrance to other galleries which had not been explored, were still closed by large burnt bricks, amongst which were a few square stones, inscribed on one edge with two lines of cuneiform characters, containing the name and titles of Nebuchadnezzar, king of the Chaldees, the inscription usually found on Babylonian bricks. It was evident that they had originally belonged to an edifice erected by that monarch, and had been taken from its ruins to form this covering to the vaults and tombs. . . .

"It was thus evident that the remains of the original edifice, if any still existed, were to be sought far beneath the surface and I accordingly opened tunnels at the very foot of the mound nearly on a level with the plain. A few days' labor enabled me to ascertain that we had at last found the ancient building. On the eastern side the workmen soon reached solid piers and walls of brick masonry, buried under an enormous mass of loose bricks, earth, and rubbish. We uncovered eight or ten piers and several walls branching in various directions, but I failed to trace any plan, or to discover any remains whatever of sculptured stone or painted plaster. . . .

"On the western and southern sides of the mound were also discovered, at the very base, remains of solid masonry. The bricks bore the usual superscription of Nebuchadnezzar, and were firmly cemented together with fine white mortar. It is thus evident that a vast edifice

river bank, and is about seven hundred yards square. The principal part of this great ruin consists of loose bricks, tiles, and fragments of stone; but nearly in the centre a solid mass of masonry,\* still entire, and even retaining traces of architectural ornament, protrudes from the confused heap of rubbish. Piers, buttresses, and pilasters may be traced; but the work of destruction has been too complete to allow us to determine whether they belong to the interior or exterior of a palace. I sought in vain for some clue to the general plan of the edifice. The bricks are of a pale yellow colour, and are not exceeded in quality by any found in the ruins of Babylonia. They are as firmly bound together by a fine lime cement as those at the Birs Nimroud, and cannot be separated entire. Upon nearly every brick is clearly and deeply stamped the name and titles of Nebuchadnezzar, and the inscribed face is always placed downwards. This wonderful piece of masonry is so perfect, and so fresh in colour, that it seems but the work of yesterday, although it is undoubtedly part of a building which stood in the midst of old Babylon.

"This ruin has for ages been the mine from which the builders of cities rising after the fall of Babylon have obtained their materials. To this day there are men who have no other trade than that of gathering bricks from this vast heap and taking them for sale to the neighbouring towns and villages, and even to Baghdad. . . . To obtain these materials, the masonry which had withstood the decay of ages has been gradually destroyed, until only the present shapeless mass remains, whilst the heap itself has been tunnelled in every direction in search of such entire brickwork as may still exist beneath the surface. This process having now gone on for centuries, the ruin has been more fully explored than it could possibly be by any stranger with limited time and means at his command. Those who had been engaged from childhood in this brick-trade, assured me that no sculptures or inscribed slabs had been discovered in their time, and that no remains of stone walls existed in any part of the mound. The tunnels explored by my workmen led to nothing but solid brick-masonry. . . .

"A large number of the fragments of brick found in this ruin are covered with a thick enamel or glaze. The colours have resisted the effects of time, and preserve their original brightness. Parts of figures and ornaments may still be traced on many specimens. The principal colours are a brilliant blue, red, a deep yellow, white, and black. We learn from ancient authors that the walls of the palaces of Babylon were painted with the figures of men and animals, and there can be no doubt that these enamelled

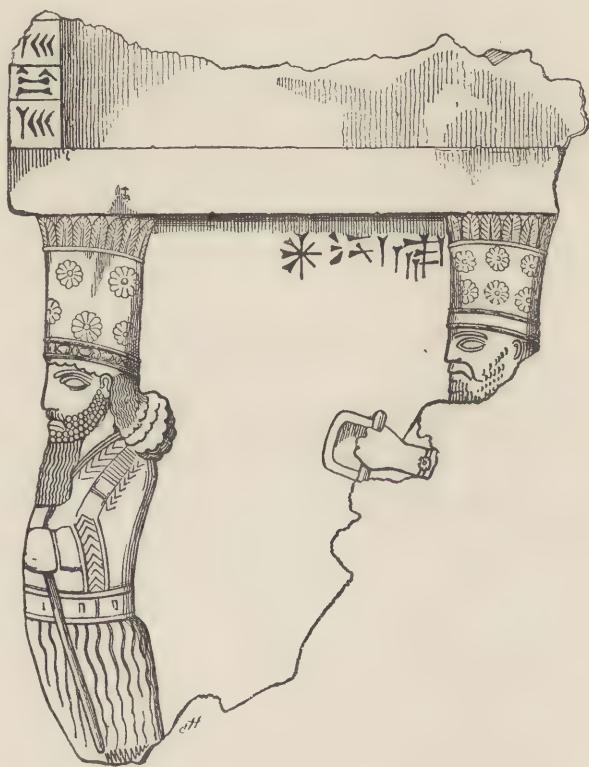
once stood either on the level of the plain, or raised upon enormous piers and buttresses of brickwork, and that the tombs, and any traces of building that may exist on or near the present surface of the mound, are of a more recent period. I will not attempt to decide whether Babel be the remains of a great palace of Nebuchadnezzar, of the celebrated hanging gardens, or of a temple. The Jews, in the time of Benjamin of Tudela, appear to have believed it to be the ruins of the palace."

\* Mr. Layard appears to use the term "masonry" here and elsewhere for brickwork.



bricks are from the walls of an edifice. In the last century, De Beauchamp, a French traveller, was told that a chamber with walls of varnished bricks had been discovered in this very mound, and that upon the sides of one of them were depicted figures of a cow and of the sun and moon, a story to which some credit may be attached, as these emblems are now known to be Assyro-Babylonian. . .

“With the exception of the solitary pile of masonry rising in the centre, the ruin consisted of little else than of shattered brickwork. I continued, however, a few of the tunnels already opened, but the falling rubbish, which had more than once overwhelmed the seekers after bricks, soon compelled me to desist. The only relic of any interest I was fortunate enough to discover was a fragment of limestone, on which were parts of two figures,



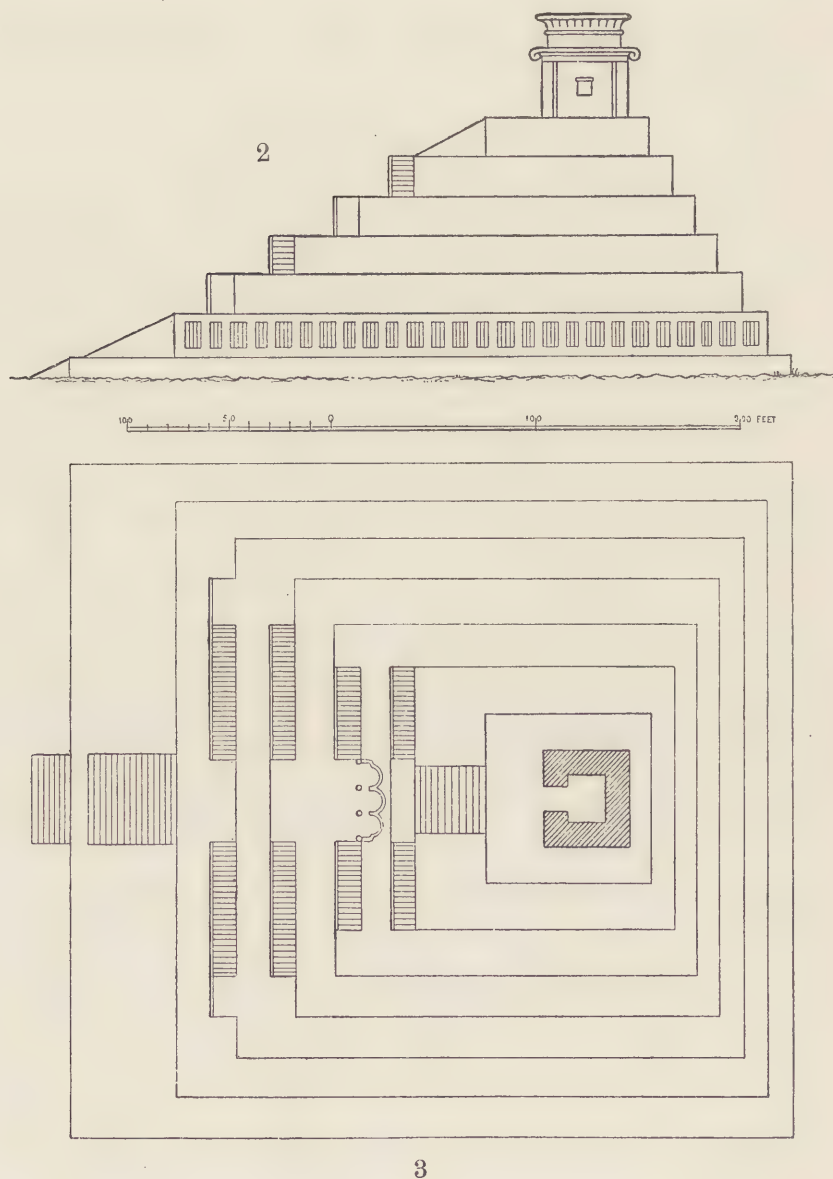
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undoubtedly those of gods. The name of one deity is added in Babylonian characters to its sculptured image. It is probably only a small portion of a slab or frieze containing a series of similar figures; but I was unable, after a careful and prolonged search, to find any other pieces. The fragment, however, is interesting, as showing that the Babylonians portrayed their divinities in the same manner as the Assyrians. They wear the same head-dress ornamented with feathers and rosettes, the long

curled hair and beard, and the embroidered garments, and they hold the same staff with a ring as the gods in the rock sculptures of Bavaria."

We give a representation, in Fig. 1, of this most interesting fragment, copied from the engraving in Mr. Layard's work.

Various opinions have been held by travellers and explorers as to what



the immense pile of brickwork, known as the Birs Nimroud, "the palace of Nimrod," of the Arabs, and "the prison of Nebuchadnezzar," according to the Jews, originally was. By some it is believed to have been the tower

of Babel of the Scriptures ; by others the wonderful temple of Belus ; and, again, by others, and certainly with better authority, the great centre of Chaldean worship, the temple of the Seven Spheres, at Borsippa. It is to Colonel Rawlinson that the discoveries are due which tend to prove that the last supposition is the most correct one.

Mr. Fergusson gives a very probable restoration of this remarkable edifice, which we venture to reproduce from the drawings ; \* as well as give his terse description relative to the arrangement and decoration of the temple. He says :—" A few miles to the south-west of Babylon stands a great mound now known as the Birs Nimroud. This has recently been explored by Colonel Rawlinson, and from the inscriptions found among the ruins it is ascertained to be the remains of the Temple of the Seven Spheres at Borsippa.

" It consists, as is shown in the woodcuts (Figs. 2 and 3), of an extensive basement, about 6 ft. in height, on which stands a pyramid of six stories, averaging somewhat less than 20 ft. each in height, and every story 42 ft. less in horizontal dimensions than the one below it. They are not placed concentrically one upon the other. Towards the front the platforms are 30 ft. in extent, and consequently are 12 ft. in the rear. On the sides they are equal, 21 ft. each.

" On the upper platform now stands the fragment of a tower about 30 ft. in height, which once enclosed a chamber—the sanctum of the temple—following the analogy of the temple of Belus, as described by the Greeks, which the building resembles in almost every particular. There probably was also a shrine or image on the third platform. In front were the steps that led to the summit. The lower story was black, the colour of Saturn, and panelled like the new building discovered at Khorsabad ; the next orange, the colour of Jupiter ; the third red, emblematic of Mars ; the fourth yellow, belonging to the Sun ; the fifth and sixth green and blue respectively, as dedicated to Venus and Mercury ; the upper probably white, that being the colour belonging to the Moon, whose place in the Chaldean system would be the uppermost.

" These peculiarities confirm so completely the Greek descriptions of the temple of Belus, and of the seven coloured walls of Ecbatana, that we may feel confident of having a nearly perfect restoration of at least one of the principal forms of Babylonian temples.

" The inscriptions of Nebuchadnezzar mention, besides this temple at Borsippa, several others, which he considered as more important. As all traces of these, however, are lost, it is probable that they were of a different form, perhaps more like the temples of Egypt or Greece, but constructed of more perishable materials. If of the same pyramidal form as this, such great masses could hardly have disappeared."

All the knowledge which we at present possess, or are indeed likely to possess, regarding Babylonian architecture may be summarised as

\* *Handbook of Architecture*, p. 183. (Ed. 1859.)



follows:—All buildings were constructed of bricks, either sun-dried or burnt, and probably in the generality of cases of both combined; the latter being employed in positions exposed to the action of the weather, whilst the sun-dried bricks formed the inside masses of exterior walls and the entire fabric of interior ones. Bricks covered with vitrified enamels were used for the decorations of important edifices; a fact clearly proved by the discoveries made by Mr. Layard and others. The use of enamelled bricks by the Assyrians has been shown by the exertions of M. Place, at Khorsabad, where he discovered a pair of the city gates, arched over, and decorated with a sort of archivolt of blue and yellow enamelled bricks. We may, therefore, reasonably suppose that they were very largely employed by the Babylonian architects who had, indeed, so few resources in the way of building materials. From the large dimensions of the mounds which are distributed over the site of the city, and in some of which remains of buildings have been discovered, we may safely conclude that the palaces and temples were erected on platforms, artificially constructed after the manner of those of Assyria. The walls of the palaces do not appear to have been covered with sculptured and inscribed slabs, as those of Koyunjik and Khorsabad, their place being taken by ornamentation executed in enamelled bricks or painted plaster. The small fragment of sculptured stone (Fig. 1) discovered by Mr. Layard, shows, however, that to some extent, and perhaps only for such purposes as the decoration of temple shrines, sculpture in stone was used. The extreme difficulty of obtaining stone or alabaster at Babylon no doubt precluded its adoption even in fortress and palace architecture. The researches of Colonel Rawlinson at Birs Nimroud, so ably put in form by Mr. Fergusson, whose restoration we have above alluded to, probably tell us all we shall ever know regarding the temple architecture of Babylonia. Of the forms of the palaces and their attendant buildings, the public edifices of the city, and ordinary dwellings of the people, and the modes of roofing structures in general, we know absolutely nothing.

Mr. Layard remarks:—"It may be conjectured that in their general plan the Babylonian palaces and temples resembled those of Assyria. . . . One country appears to have borrowed from the other; and, without attempting to decide the question of priority of independent existence as a nation and of civilization, it can be admitted that they had to a certain extent a common origin, and that they maintained for many centuries an intimate connexion. . . . It may have been a modification of the Assyrian art which afterwards gave birth to the Persian, for it was through Babylon that the arts appear to have penetrated partly, if not entirely, into Persia."

The student who desires to learn all that is known in connexion with Babylonian chronology and the several dynasties of its monarchs should consult the article "Babylonian Architecture," in the *Dictionary of Architecture*, by the Architectural Publication Society, which is entirely devoted to those subjects.

**BABYLONICUM.** The late Latin term for a rich woven and embroidered material, probably identical with that more commonly called baldakinus or baudekin. (See *Baudekin*.) It derived its name from Babylon, where such costly and highly ornamented fabrics are understood to have originated.\*

**BACCHUS.** In classic mythology, the god of wine. (See *Dionysus*.)

**BACE.** A term met with in mediæval inventories, and understood to signify the small pedestal inserted in a niche or tabernacle for the support of an image. Professor Willis, in his *Architectural Nomenclature of the Middle Ages*, says :—" 'Bodies, housyngs, gablets, and fynoly,' or finials, have been already explained; but it must be observed that here the 'baces' are always coupled with the housyngs, and in the herce at Westminster we find 'ymages, housyngs, baces p'r les dits ymages, 3 cwt. 1 qr. 16 lbs.' These baces therefore were the pedestals of the images."

**BACK ARCH.** The term occasionally employed by English architects to designate the arch thrown over an opening towards the inner face of a wall, which differs in form and proportions from that which appears on the outer face. (See *Arrière-voussure*, *Rear-arch*, and *Rear-vault*.)

**BACKGROUND.** In painting, the space around a portrait or group of figures, which is so treated as to appear to extend behind them. The effect of distance in a picture is commonly spoken of as divided into three stages, namely, the foreground, the middle-distance, and the background. Mr. Fairholt remarks :—"In portrait-painting, the nature and treatment of backgrounds has varied in the hands of almost every master, yet there are certain recognised methods which are more worthy of imitation and study than others. In most of the portraits of Titian, Vandyke, and Rembrandt, the backgrounds represent only *space*, indicated by a warm brown grey tone, and this treatment is the most effective; the spectator's eye is at once attracted to the face, from which the attraction is not distracted by frivolous accessories; but the tone of colour in backgrounds must depend upon the tone of the carnations in the flesh. Asphaltum, bitumen, and other warm transparent browns, deepened with blue, appear to have been most frequently employed by the above-named painters." †

**BACK-PLATE.** That portion, or half, of the cuirass which protects the back of the wearer. It is attached to the front portion, or breast-plate, by hinges and clasps, or by leather straps and buckles, termed *aiguillettes*. (See *Cuirass*.)

\* "BABYLONICUM, Acu pictum etiam alibi quam Babylone." Ducange. *Glossarium*.

† *A Dict. of Terms in Art.*

**BADGE.** In heraldry, a figure or object of a distinctive character, assumed by an individual or a family with the view of being borne in its simple form, or in combination with a motto, as a cognizance, easily recognised and remembered. Badges were chiefly worn by the servants, retainers, and followers of royal or noble personages, who, being beneath the rank of gentlemen, were not entitled either to armorial bearings or personal badges. Speaking of the badge, Mr. Planché justly states it to be "the earliest personal distinction of the Middle Ages, and the origin of armorial insignia. Wace tell us that at the battle of Hastings all the Normans had made or adopted cognizances, that one Norman might know another by, and that none others bore; but we fail to distinguish any such signs in the Bayeux Tapestry. Upon the general adoption of regular and hereditary armorial bearings, the badge was transferred from the chief to his retainer, and from the banner to the standard. It was likewise used for the decoration of tents, caparisons of horses, and household furniture. Modern



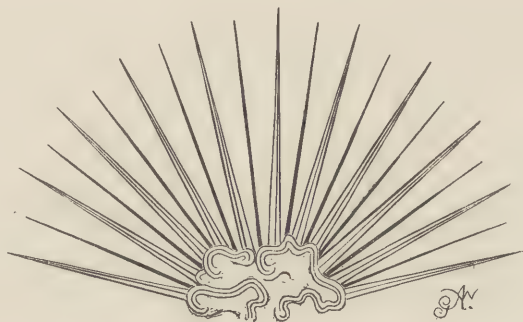
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writers have frequently confounded it with the crest and the device, but it was perfectly distinct from both. It was never borne on a wreath, like the former, and it differed from the latter by becoming hereditary with the arms, while the device, properly so called, was only assumed on some particular occasion, to which it usually bore a special reference." Badges appear to have been frequently designed or selected with the intention of conveying some definite idea, relating to the name, rank, office, or personal characteristics of the owner; hence we find certain forms which may appropriately be termed rebus badges. Although they had their origin before the introduction of true heraldic coats of arms, badges continued in favour throughout the whole of the middle ages. They were sometimes borrowed from the charges of coats of arms; sometimes they were similar to the crests; but more frequently



they were distinct in all respects from what appeared in the regular armorial bearings.

When the badge was worn by a sovereign, noble, or knight, it usually appeared combined with the ornamentation, or as a distinct powdering, embroidered on a robe, tunic, or other article of costume, as shown by the effigies of Richard II, and Anne of Bohemia, in Westminster Abbey. The tunic of the king is covered with his badges, the white hart with crown and chain (Fig. 1), the rays of



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the sun issuing from behind clouds (Fig. 2), and the open pod of the broom. The robe of the queen is powdered with her badges, the ostrich, with a crown and chain, and with a nail in its beak; and an interlaced knot, somewhat resembling the letter **a**; alternating with these are initials surmounted with crowns.

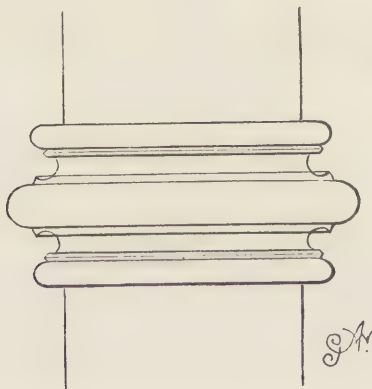
When worn by servants and retainers, the badge was usually embroidered on the breast, back, or sleeve of the outer garments; or, executed in metal, engraved or wrought in relief, it was commonly attached to the upper part of the sleeve only.

**BADIGEON.** (*Fr.*) The term employed by French architects to designate a preparation, usually of a buff colour, used for covering the exterior or interior walls of buildings, either for the purpose of imitating stone or imparting a cleanly and uniform tone to them.\*

\* **BADIGEON.** *s.m.* Le badigeon est une peinture d'un ton uni que l'on passe indistinctement sur les murs et les divers membres d'architecture extérieurs ou intérieurs d'un édifice. Ce n'est guère que depuis deux siècles que l'on s'est mis à badigeonner à la colle ou à la chaux les édifices, afin de dissimuler leur vétusté et les inégalités de couleur de la pierre sous une couche uniforme de peinture grossièrement appliquée. La plupart de nos anciennes églises ont été ainsi badigeonnées à l'intérieur à plusieurs reprises, de sorte que les couches successives de badigeon forment une épaisseur qui émousse tous les membres de moulures et la sculpture. Souvent le badigeon est venu couvrir d'anciennes peintures dégradées par le temps; il est donc important de s'assurer, lorsqu'on veut enlever le badigeon, s'il ne cache pas des traces précieuses de peintures anciennes, et dans ce cas il ne doit être gratté ou lavé qu'avec les plus grandes précautions."—Viollet-le-Duc, *Dict. Rais. de l'Arch. Française.*

The term was adopted in English terminology about two centuries ago; and it appears to have been since used with several significations by different classes of workmen, masons employing it for a sort of stopping, made of ground stone mixed with plaster or cement and water, with which imperfections are disguised; joiners and workers in wood generally for a composition of sawdust or wood filings and glue, or of any other materials, used for filling up cracks, bad joints, or other defects in wood-work; and painters, for any kind of wash laid upon walls for the purpose of imparting to them the appearance of stone; with this view the badigeon is, for the most part, composed of finely ground freestone. For the most celebrated receipts for preparing durable badigeon, see M. E. Bosc's *Dictionnaire Raisonné d'Architecture*, article *Badigeon*.

**BAGUE.** (*Fr.*) The term employed by French architects to designate the annular moulding introduced in the shaft of a pillar, either midway between the base and capital, or repeated at intervals in its height, as in Fig. 1, from the nave of the cathedral of Noyon (twelfth



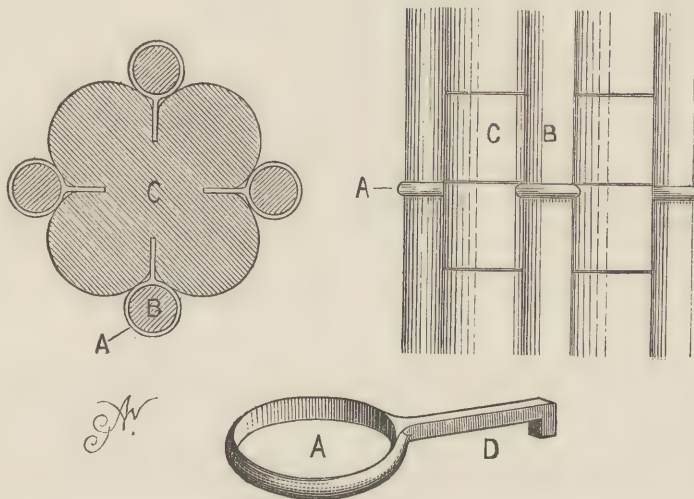
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century). It is also applied to a metallic ring or clasp which is employed for the purpose of linking a slender detached shaft to a main shaft, pier, or to a wall, as the case may be, as shown in Fig. 2, from the nave pillars of the cathedral of Salisbury. The detached shaft is jointed within the ring.

It is desirable that the present term should be adopted by English architects; for that most commonly used for this architectural detail, namely, *BAND*, is neither expressive nor correct. (See *Band*.) It is sometimes termed a *SHAFT RING*, certainly a more correct appellation than *Band*. The French architects, in addition to *Bague*, employ the term *ANNELURE*.

The introduction of the *bague* was, as M. Viollet-le-Duc points out,

due to a constructional difficulty which arose on the adoption of slender detached shafts in the architecture of the twelfth century. These slender shafts, formed from long stones set on end, were seldom of sufficient length to reach from the base to the capital of the pillar or pier against which they were to be placed, without requiring one or more joints in their height; and this remark applies with still more force to those tall and slender shafts placed against wall surfaces. With the object of preventing such joints from appearing unsightly, and with the still more important aim of securely attaching the shafts at intervals to the main pillars or walls, the architects of the twelfth century fell upon the happy expedient of introducing thin bond stones, rendering



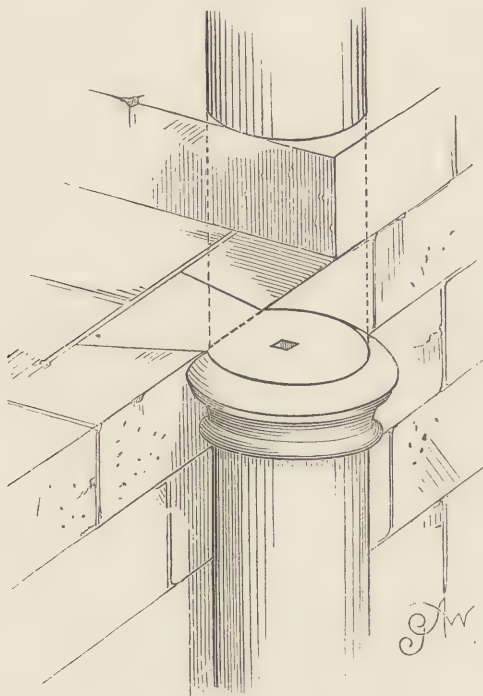
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them ornamental by moulding the portion which appeared in the shaft, and constructional by building their tails into the body of the pillar or wall, as shown in Fig. 3. Although the bague became a decidedly ornamental feature in the Early Pointed styles, and was frequently introduced in large pillars and in slender shafts which were not detached, still it is evident that its structural aspect was never lost sight of. In Salisbury cathedral, the nave pillars are of Purbeck marble, of the plan shown in Fig. 2; the four detached shafts, B, are tied to the main pillar, C, by bagues of brass, A, in the manner indicated in the cut. These bagues are simply rings, semicircular in section; and are furnished with tail pieces, we presume somewhat of the form shown at D, which are let into the upper bed of one of the blocks forming the central shaft. There is no attempt at ornamentation here; all is evidently a simple matter of construction.

In certain pillars of the nave of Westminster abbey two tiers of metal bagues are introduced. The pillars are cylindrical, with four



attached and four detached shafts round them. The bagues in this case are about one inch and a half deep, and richly moulded. It would naturally be expected that such metal rings would appear only on the detached shafts, where alone they are necessary; but such is not



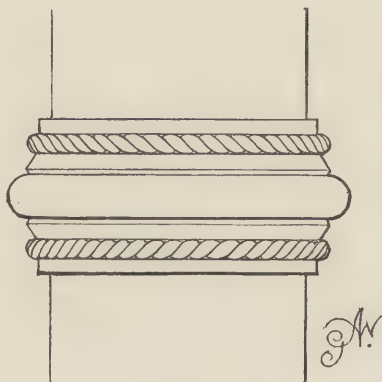
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the case; for the sake of uniformity, the builders have inserted similar bagues in the attached members of the pillars.

In English architecture, the stone bague first makes its appearance in late Norman work, as in the church of St. Peter, Northampton. Here we find it as a strictly ornamental feature, dividing the cylindrical shafts of the nave pillars, and in a treatment more pronounced than is elsewhere met with throughout the entire range of English architecture. A drawing of one of these bagues is given in Fig. 4, where it will be observed that the mouldings are of considerable dimensions in proportion to the diameter of the shaft, and comprise two enriched members. It is a fact worthy of note that although the nave pillars of St. Peter's are alternately cylindrical and grouped (quatrefoil), the architect has confined the bague to the former, omitting it where it would have seemed more consistent, and have appeared to tie the four members of the quatrefoil shaft together. The bague also appears on the semi-cylindrical responds, but is omitted in the nook shafts of the tower arch immediately adjoining. In this

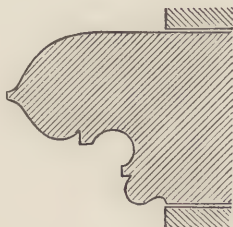
building, at least, the constructional element of the *bague* has been studiously avoided by its architect; a remarkable fact for so early a date.

Examples of the *bague*, both as a constructional and an ornamental feature, are to be found in the Transitional doorway of Ketton church, Rutlandshire, where they are bonded into the wall, and support the slender detached nook shafts.

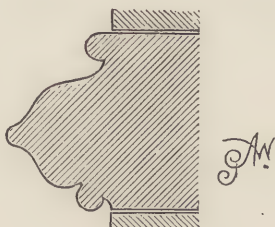


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There is no building in this country in which the *bague* is so largely introduced as in Westminster abbey; all the pillars in the main arcades in the nave, choir, and transepts, with the exception of the tower piers at the crossing and at the west end, have two tiers of them, either executed in stone or brass. The *bagues* which appear in the Early Pointed work of Henry III. and Edward I. are for the most part applied constructionally, and support detached shafts; but those of the later work, towards the west end of the nave, are altogether decorative; and, although much heavier and different in detail to those of



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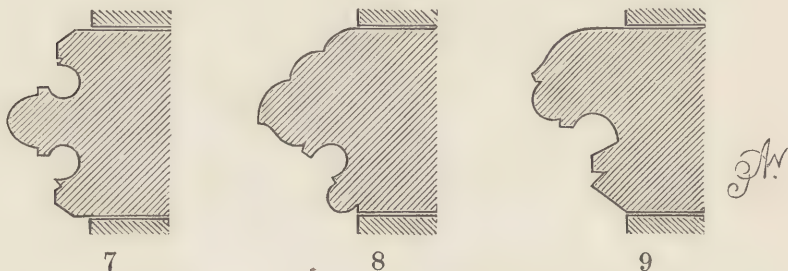


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the early pillars, were doubtless introduced to keep up the general appearance of uniformity. Fig. 5 is a section of one of the Early English examples in the north transept; and Fig. 6 is a section of the

Early Perpendicular bagues in the nave. Bagues are also introduced in the vaulting shafts of the aisles, to correspond with those of the main pillars opposite. On all the pillars which have stone bagues in the detached shafts, their mouldings sweep round the large central shaft: where metal is used, the bagues are confined to the small detached and attached shafts, as we have already explained.

Fine examples of richly moulded bagues are to be met with in numerous Early Pointed buildings, especially in the cathedrals of Lincoln, Salisbury, Canterbury, and Wells, and in the remains of the abbeys of Byland, Rievaulx, Whitby, Bridlington, Netley, and Tintern. The choir pillars of the last-named building have still the stone bagues, which once retained the slender detached shafts, projecting in the hollow members; the shafts themselves have disappeared. The mouldings of these bagues are not continued round the salient members of the



pillars. Fig. 7 is from the window shafts in the nave aisles of Byland abbey; Fig. 8 from the vaulting shafts of the north aisle of the nave at Bridlington; and Fig. 9 is from the windows of the south aisle of the choir of Rievaulx abbey. These represent the finest types of the bague as found in English architecture. Bagues enriched with sculptured ornament are to be found in Lincoln cathedral.

In Late Decorated and Perpendicular work, the bague appears very rarely; it evidently died out of general use with the abandonment of the detached shaft. In neither of these styles was there any necessity for its use on constructional grounds. We have alluded to its appearance in the Early Perpendicular pillars in the nave of Westminster abbey; still more important examples, however, are to be found in the nave of Canterbury cathedral, a work of a little later date (1378-1411). Here single bagues are introduced in the attached shafts of the main pillars and the vaulting shafts of the aisles, whilst two orders of bagues appear in the vaulting shafts of the nave, which rise from the floor to the springing of the vault.

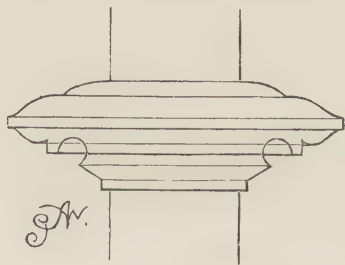
We find, on a comprehensive survey of the most perfect mediæval buildings in France, that the bague does not appear to have been introduced so frequently by the architects of that country as by those of England. Detached shafts are certainly not so numerous in Early



French as they are in Early English work. The continent cannot present a building so rich in them as Lincoln, Salisbury, or Wells cathedral. Even where they are pretty freely used, the *bague* seems to be avoided where practicable. For instance, in the pillars dividing the ailes of the cathedral of Notre-Dame, at Paris, which are composed of a cylindrical core surrounded by twelve slender detached shafts, no *bagues* are introduced, the shafts being monoliths. Here there was every excuse, or, more properly speaking, reason, for their adoption; and it is probable that these clustered pillars would have been improved in appearance by them.

In German mediæval architecture the *bague* is still more uncommon than in French; the only building we know in which it appears, in any degree of profusion, is the abbey of Maulbroun. The cloisters, west porch, and refectory are peculiarly rich in the feature. The circular pillars which divide the refectory into two portions have boldly moulded *bagues* in the centre of their shafts.\*

*Bagues* are frequently met with in the slender turned shafts of mediæval wood screens, stalls, &c., where they are introduced with the view of imparting richness and an appearance of weight and strength. Fig. 10 is a good example, from the Early Decorated stalls in Winchester cathedral.



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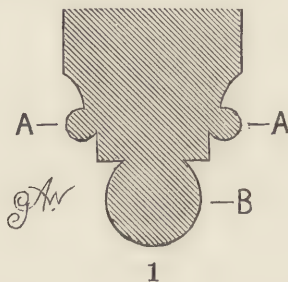
Other examples exist in the Early English screen of Stanton Harcourt church, Oxon; the Early Decorated screen of Northfleet church, Kent; the Decorated screens of the churches of Cropredy, Northamptonshire, and Shotswell, Oxon; and the Perpendicular stalls of Manchester cathedral.

**BAGUETTE.** (*Fr.*) The term used by the French architects to designate a cylindrical member of small diameter, frequently met with in all descriptions of mouldings. When the member exceeds an inch and a half in diameter it ceases to be called a *baguette*, and is designated a *boudin*. In Fig. 1, AA are *baguettes*, and B is a *boudin*.

\* Drawings of this interesting building are given in King's *Study-book of Mediæval Architecture*, vol. i., pls. 44—48.

The same name is retained even when the member is cut up into a succession of balls, or carved into olive leaves, a spiral ribbon, a rope, or, indeed, any such simple enrichment. It is also employed to designate the round beads or bowtels wrought at the angles of doorways or other exposed stonework in mediæval structures; and in woodwork it is used to designate all projecting beads of small dimensions on angles or flat surfaces.

The term *baguette* has been introduced into English terminology, and is applied to any very small cylindrical member, attached to or worked out



of an angle, in wood or stone. It is, in short, another name for a bead. The term has also been used for a hip-roll of a roof.

**BAILEY OR BALLIUM.** The area or court situated between the keep and the outer walls or defences of a fortress. Some castles had two or three ballia, designated the inner, middle, and outer, according to their positions; these were divided from each other by embattled walls, and were successively defended during a siege. The donjon or keep, and all the important buildings of the fortress, were erected in the inner ballium. The keep, which was the last resort during a siege, was separated from the ballium by a moat. The remains of Oxford, Colchester, and Bedford castles, and the Tower of London, present notable instances of double ballia.

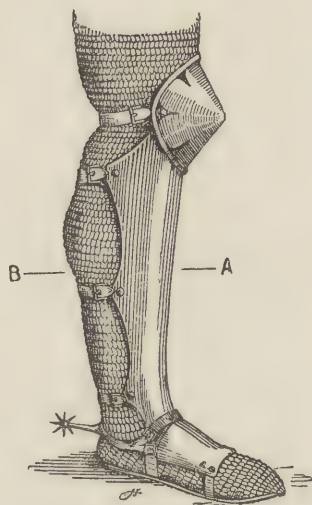
The term appears to have been occasionally applied to walls or other erections constructed for the defence of the suburbs of towns; but in connexion with castles, it was invariably applied to the area within or between the walls or lines of fortifications.

**BAINBERGS.** (*Ger. Bein-bergen.*) Shin-guards, formed of leather or metal, attached in front of the legs over the chausses of mail. These additional protections were introduced in the thirteenth century, and were the precursors of the greaves or jambs of the plate-armour of the following century.

The accompanying illustration\* shows the usual mode of securing

\* Viollet-le-Duc.—From a thirteenth century French MS. *Biblioth. Nation.* Paris.

the bainbergs (A) over the chausses of mail (B), by means of straps



and buckles. The genouillères, or knee-guards (*Ger. kniestücke*), are shown as quite independent pieces, also attached by straps and buckles.

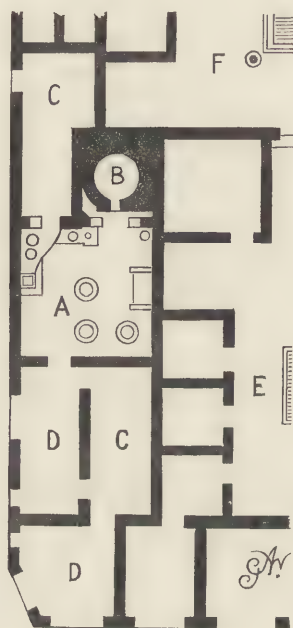
**BAKERY OR BAKEHOUSE.** The apartment or building, in connexion with a mansion or any description of establishment, in which the process of bread-baking is systematically carried on. It is simply furnished with kneading troughs, bins, tables, and one or more ovens according to its extent.

The most important remains of an ancient bakery are those discovered at Pompeii, attached to the dwelling known as the "house of Pansa." It does not appear, however, to have belonged to Pansa, as there are no doors connecting any of its rooms with the interior of the house. It was in all probability a public bakery with shops attached. In Fig. 1 is given a plan of a portion of the house with the bakery adjoining. The principal apartment, A, contains all the requirements for grinding the grain, preparing and baking the bread. On its floor are placed three mills; and against the wall on the right is a large table on which the bread was made ready for the oven; on the left is the kneading trough, and coppers for boiling water. The oven, B, is of circular shape; close to its entrance were found vases, probably for containing oil or water. The apartments, C, are store rooms for grain, fuel, &c.; and D are the shops. E is portion of the atrium of the house; F portion of the peristylum.

In monastic establishments the bakery always formed an important and, indeed, indispensable adjunct. On the ninth century plan of the abbey of St. Gall, which is given in full in article *Abbey*, we find no fewer than three bakehouses; one in connexion with the hospitium for



distinguished guests; one attached to the paupers' hospitium; and the third, and of course the largest, connected with the monastic buildings proper. In all cases a brewhouse adjoins the bakery. The arrangement of the chief bakery, in relation to the kitchen, brewhouse, and mills, is given in Fig. 2, taken from the modernised version of the ancient plan by Mr. Willis.\* A is the bakery, with large kneading



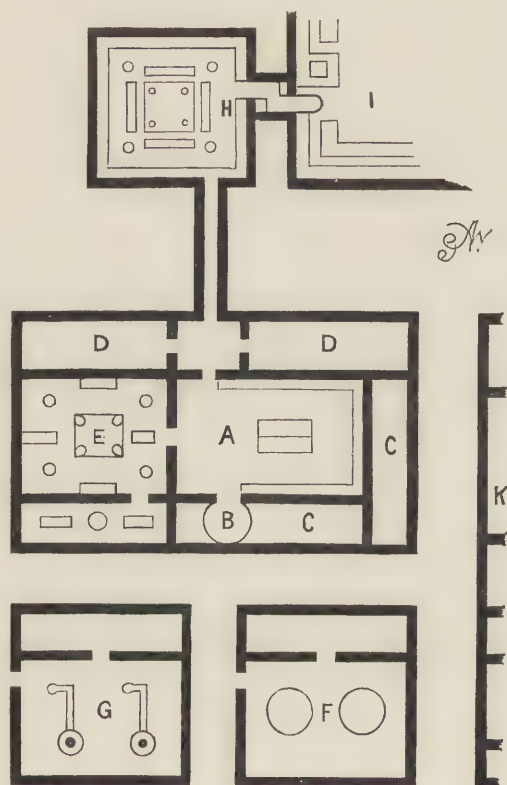
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troughs in the centre, and a table and shelves extending round the greater portion of the walls. The oven, B, is a large circular construction extending across an adjoining apartment, C, which along with another at the end of the bakery appear to be stores for flour and meal. D are apartments for the bakers, brewers, and kitchen servants. The brewhouse, E, opens from the bakery. F is the building containing the hand-mills (*molæ*); and G is another of similar dimensions containing two large mortars (*pilæ*). The kitchen, H, is connected with the bakery by a long passage, and with the refectory of the monastery, I, by a small serving-room. K is the factory belonging to the establishment. (See the complete plan in article *Abbey*.)

A bakery, either as a detached building, or as an apartment situated closely adjoining or immediately connected with the kitchen, formed a necessary portion of all mediæval castles and mansions, as, indeed, it does of all modern establishments of any importance. Speaking of

\* Given in the *Archæological Journal*, vol. v., p. 85.

dwellings of the fifteenth century, Mr. Parker remarks:—"The bakehouse is generally situated near the kitchen. Sometimes the ovens are in the back kitchen, as at Haddon Hall; more frequently it is a separate chamber, and, having also the arch of a large fireplace in it, is frequently called a second kitchen, but the pair of ovens were



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usually placed under an arch of this kind. At Fawsley the whole arrangement is complete, the chimney-arch has the two ovens under it, all being original. In this instance the bakehouse is separated from the kitchen by the back kitchen or scullery." In some cases the bakery and brewhouse appear to have been one apartment. In the plan, given by M. Viollet-le-Duc, of the kitchen (fifteenth century) of the palace of the Dukes of Burgundy, at Dijon, the oven occupies one corner of the apartment. In this case the portion of the kitchen immediately adjoining the oven was in all probability set apart as a bakery. There may have been an independent bakehouse, however, in which case this oven would have been used for pastry and cooking purposes.

**BALANCE.** The emblem of judgment or justice. It is found with this signification on the coins of Diocletian and some other emperors of Rome; and has been introduced by mediæval artists in representations of the Last Judgment. In those remarkable sculptures which decorate the tympani of the great portals of the cathedral of Autun (twelfth century), and Notre Dame, at Paris (thirteenth century), the balance is introduced, and the souls of the risen are weighed therein. A portion of the sculpture on the tympanum at Autun is given



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in Fig. 1. The composition is curious, but most expressive. The balance is held by a heavenly hand, which issues from clouds, and is tended on the left by an angel and on the right by a demon, most probably intended for Satan. In one scale is placed an imp, impersonating the damning weight of sin, whilst in the other the soul of a righteous person is laid to be tested. As its righteousness far outweighs the weight of sin, the angel watches over it with extreme solicitude, whilst the devil, enraged at the thought of losing it, endeavours to drag down his end of the beam. The same idea is carried out on the tympanum of the central portal of Notre Dame, at Paris, and in other mediæval representations of the Last Judgment.

The balance is one of the attributes of St. Michael, as the Angel of Judgment and the Lord of Souls; probably the angel of the Autun sculptures is intended to represent this archangel.\* In the series of sculptured angels in the presbyterium of Lincoln cathedral, the Angel

\* Illustrations of St. Michael holding the balance are given in *Sacred and Legendary Art*, vol. i., pp. 111, 112.



of Judgment carries the balance, one scale of which rests on his lap, containing the souls of the righteous, which he blesses with his right hand; from the other scale the souls of the wicked are represented falling to perdition.

Justice has frequently been impersonified by a female, blindfolded, and carrying the balance.

The balance has been found represented on the early Christian tombs, but its signification, in the generality of instances, is obscure: it may allude to the trade of the departed; a purchase in connexion with the tomb itself; or it may allude to the strict justice which characterised the dealings during life of the person in whose honour the tomb was erected.\*

**BALCONY.** A projection from the wall of a building, usually in front of a window or other opening, supported round its outer edge by a balustrade, parapet (commonly pierced), or railing; the construction forming an elevated floor or platform capable of accommodating one or many persons. Balconies appear both on the exterior and in the interior of buildings.†

Balconies are frequently met with in the buildings of Italy, France, and Spain, where they are commonly resorted to for the enjoyment of the open air during the cooler hours of the day. They are sometimes of the simplest description, consisting of a slab of stone supported on plain consoles or brackets, and surrounded by a light iron railing; but they are more frequently rendered important architectural features by being carefully designed and elaborately ornamented. The palaces of Venice supply

\* "The balance appears sometimes upon Christian tombs. A sepulchral stone from the cemetery of St. Cyriac (Aringhi, *Roma Subt.* ii., 139) displays this instrument in conjunction with a crown; it may also be seen upon a marble slab taken by Bosio from a cemetery of the Via Latina (Aringhi, ii., 658), accompanied by a house, a fish, by a doubtful object which has been taken wrongly for a candelabrum, and by a mummy set up in a niche. A monument of the same nature reproduced in the work of M. Perret (*Inscript.* No. 37) represents a balance with a weight. De Rossi (*Roma Sott.* T. i., p. 86) notices another example in the church of St. Cecilia, at Rome."—Rev. S. Cheetham, M.A., in *Dict. of Christ. Antiq.*

† "The word balcony is apparently derived from the Italian term *palco*, the floor or stage of a scaffold, and thence of a theatre: *balco*, in mediæval Latin termed *balcus* and *balconus*, is used in the same language and sense, from which are derived *balchionata* and *balconata*, translated a small railed gallery. ACHARISIUS observes that some writers give a Venetian, but others a Geneose, origin to the word. *Balcon* is used by the French architects for a row of seats projecting before the tier of boxes immediately above the pit of a theatre, according to GWILT, *Dict.* s. v.; but according to VIRLOYS as well as GLAIRE and WALSH, *Dicts.* s. v., it is used for the boxes placed upon the *avant-scène* or *proscenium*."—*Dict. of Arch.* Arch. Pub. Soc., Lond.

"BALCON, s. m.—Saillie pratiquée sur les façades des bâtiments. Elle est supportée par des consoles, des colonnes, et même par des gaines et des cariatides. Un appui de pierre ou de métal enserre ou plutôt suit les contours de cette saillie. . . . BALCONS, extrémités de la première galerie dans les théâtres modernes; les balcons avoisinent les loges d'avant-scène."—E. Bosc., *Dict. Rais. d'Arch.*

numerous examples of balconies projecting in front of the windows overlooking the canals. The Gothic ones, such as those of the Ca' d'Oro and the palazzo Cavalli, consist of thick slabs, with the mouldings of the string courses continued round their edges, carrying parapets formed of slender shafts of marble with carved capitals, small trefoil or pointed arches, cut out of long strips of stone laid horizontally on the capitals, and moulded cappings. Small animals occupy the angles of the balconies of the palazzo Cavalli. In the Renaissance palaces, the balconies are invariably protected by the ordinary forms of balustrades.

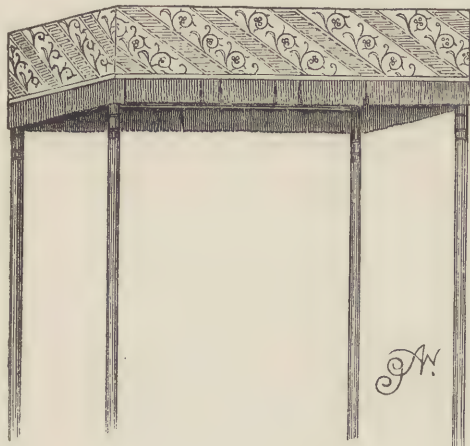
In the mediæval town halls of Italy, a balcony, called the *ringhiera*, is usually projected on the level of the first floor, from which addresses may be delivered to people assembled below. A good example is to be found in the broletto of Monza, and others occur in similar buildings at Como and Bergamo.\* That at Monza is protected by a roof projecting, like the balcony, from the wall, and supported by two slender pillars which rise from the angles of the parapet.

**BALDACHIN.** A canopy chiefly formed of cloth of gold or other rich stuff, supported on four standards or slender pillars, or suspended by chains or cords, above an altar or throne; also a canopy of a similar nature carried over distinguished personages in pageants and state processions. The term has been frequently applied to the constructions of stone or metal erected over the high altars in churches, but they are more correctly designated *ciboria*. We shall therefore confine ourselves in the present article to what appears to us as the true signification of the term, as already stated.

The origin of the word baldachin (*Ital. baldachino*; *Fr. baldaquin*; *Ger. baldachin*) has been often discussed, and some uncertainty exists with reference to it. It is generally supposed to come from the precious stuffs, manufactured at Bagdad or Baldak, which were known during the middle ages by such names as "baldakin," "baldacca," "baudekin," &c., and with which materials the canopies were formed or enriched. On this subject Dr. Rock remarks:—"The word 'baudekin' itself became at last narrowed in its meaning. So warm, so mellow, so fast were all the tones of crimson which the dyers of Bagdad knew how to give their silks, that, without a thread of gold in them, the more glowing tints of those plain crimson silken webs from Bagdad won for themselves the name of baudekins. Furthermore, when they quite ceased to be partly woven in gold, and from their consequent lower price and cheapness got into use for cloths of estate over royal thrones, on common occasions, the shortened form of such a regal emblem, the canopy hung over the high altar of a church, acquired, and yet keeps its appellation, at least in Italy, of 'baldachino.'"

\* Small drawings of these buildings, showing their balconies, are given in Street's *Brick and Marble of the Middle Ages*.

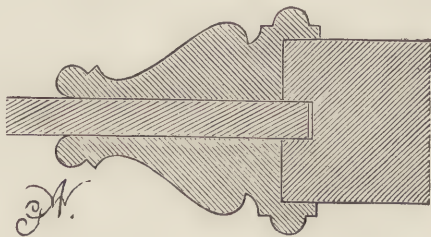
The baldachin is, properly, devoid of curtains, which strictly belong to the ciborium. (See *Ciborium*.) Fig. 1 may be accepted as the simplest form of the baldachin, which may be either a fixture, supported from the floor by the four standards, or carried in procession by four attendants.



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Baldachins of this form are found in the miniatures of middle age manuscripts. Our illustration is developed from the baldachin, represented borne over the sacred host, in an ecclesiastical procession, in a miniature of the *Heures de Juvénal des Ursins*, a valuable French manuscript unfortunately destroyed at the burning of the Hôtel de Ville, Paris, in 1871.\*

**BALECTION OR BOLECTION.** A term used with reference to mouldings, in woodwork, to indicate that portions of their members project



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from the surface of the framing to which they are applied. (Fig. 1.) These mouldings have a rich effect; and are most suitable for internal woodwork, or where it is not continually subjected to the direct action of the weather.

\* A drawing of this miniature is given in Lacroix's *Vie Militaire et Religieuse au Moyen Age*, &c., Paris, 1876.



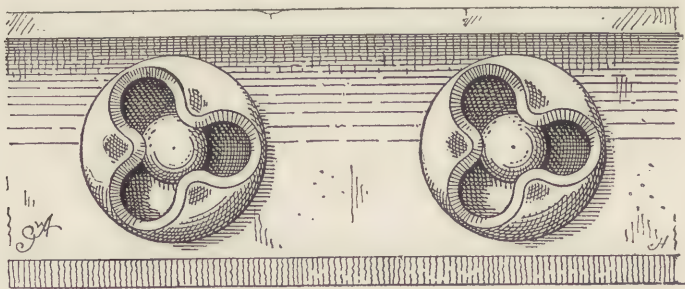
In exterior woodwork, the fewer applied mouldings there are the better and more durable it is.

The term is occasionally found written BELECTION and BOLEXION.

**BALISTA.** (*Lat.*) A military engine of great power, employed in siege operations for throwing heavy stones. Balistae were constructed in different ways, the power being obtained in some cases from the twisting of many coils of thongs or gut-ropes, and in others from powerful bows. A beautiful drawing of a mediæval balista is given in Viollet-le-Duc's *Dictionnaire Raisoné de l'Architecture Française* (vol. v., page 222), in which the power is represented as being obtained from both twisted rope and a large bow. Our readers who desire to realise, in all details, the construction of this engine, which took an important place in the military operations of the Roman and mediæval armies, should refer to the drawing alluded to and its attendant description.

**BALISTARIA OR BALISTRARIA.** The late Latin name for the building or apartment in a mediæval fortress in which the balistae and other military engines were stored and protected from the weather.

**BALL-FLOWER.** The term commonly used to designate an ornament which first appears in Early English work at the stage approaching its transition into the Decorated style, as in the west front of Salisbury cathedral. The ornament, however, may be accepted as a true character-

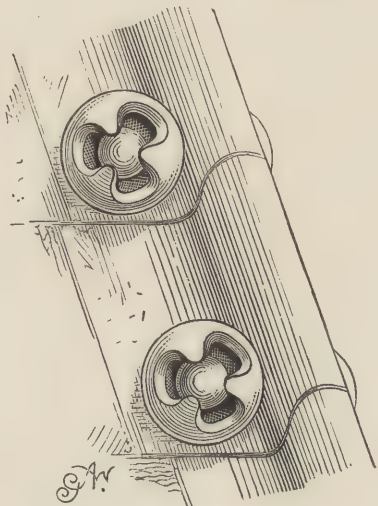


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istic of the Decorated period. It consists of a ball partially enclosed in a round cup or flower which, in the generality of examples, holds it by three wavy lobes, as in Fig. 1, from Silk Willoughby Church, Lincolnshire. Examples with four lobes are to be found in York cathedral.

The ball-flower is usually met with in the hollow members of mouldings, placed at regular intervals; and is in some instances introduced in such profusion, in windows especially, as to destroy all feeling of beauty and repose. Such is the case in windows in Gloucester cathedral, Leominster church, and Badgeworth church (Gloucestershire). It is used profusely on

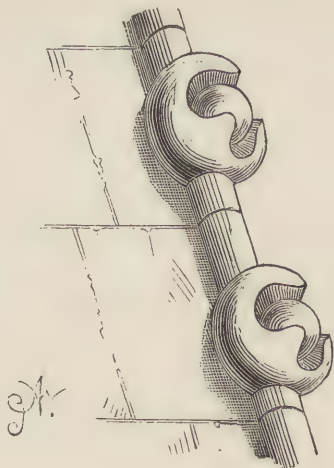
the spire of Salisbury cathedral, where it appears placed on each side of an angle bead, as in Fig. 2; and also directly upon it, as in Fig. 3. Both



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these positions are unusual; the latter being, so far as we are aware, unique.

In some examples the ball-flower alternates with other ornaments, as in the hollows of the shafts in the triforium of St. Albans abbey church



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or connected together or with other flowers by a continuous wavy stem, as in the door of Bloxham church, Oxon.

Ornaments of a somewhat similar nature appear, though rarely, in

French architecture of the twelfth and thirteenth centuries, termed by the French architects *boutons*; but we do not know of a French example precisely similar to the English ball-flower.

It has been suggested that the name HAWK'S BELL would be more expressive and appropriate for this ornament than ball-flower; but the latter term has taken too great a hold in architectural nomenclature to be readily superseded.\*

**BALLS.** In Christian art, three golden balls form the attribute of St. Nicholas of Myra, bishop and confessor. Instead of balls, three full purses are sometimes represented in portraiture of the saint. Both forms of the attribute have been derived from the following simple legend. St. Nicholas was a very wealthy man, who took great delight in doing good and relieving distress among the poor. One instance of his charity is particularly recorded: he was passing through a town at night, when he was attracted to a house from which proceeded sounds of weeping and distress. The saint made enquiries, and learned that the house was inhabited by a destitute nobleman and his three beautiful daughters, who, to save themselves from starvation, were resolving to give themselves up to a life of sin. The saint, touched with so much misery and desirous to save them from infamy, visited their dwelling three nights in succession, and on each occasion dropped through an open window a large sum of money wrapped up in the form of a ball. The father, accepting the gifts as if from the hand of Providence, portioned each of his daughters and secured honorable alliances for them. (See *Nicholas, St.*)

**BALTEUS.** (*Lat.*) Literally a belt; and the term used for the strap or belt with which the Roman soldier carried his sword or quiver. It was usually made of leather, and frequently richly ornamented with gold, silver, and jewels.

In architecture, the term appears, according to Vitruvius (Book iii., cap. 3), to have been applied to the bands of the cushion or pillow of the Ionic capital; and by other writers, to the wall which formed a belt behind the seats of the podium and immediately under the first maenianum, in an amphitheatre. (See *Amphitheatre*.) Others again extend its signification to the *præcinctiones*, or the horizontal passage ways which extended round the entire amphitheatre between each maenianum or tier of seats.

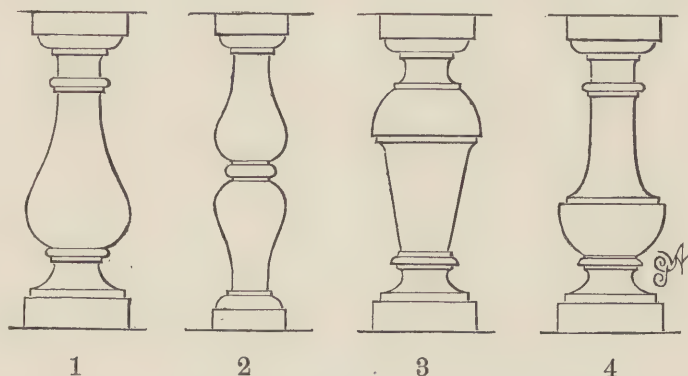
**BALUSTER.** The term employed to designate the vertical support of the capping or rail of a balustrade.† A baluster may be formed of stone, metal, or wood; and it may be designed in any form and proportions.

\* "This ornament appears to deserve rather the name of Hawk's Bell, to which it bears considerable resemblance. It is by many supposed to be intended for the Pomegranate, and to have been introduced into England in compliment to Queen Eleanor. It is comparatively seldom found in France."—*Glossary of Architecture*.

† "Baluster—The word is said to be derived from *Balastrum*, or the Greek *Βαλυστιον*, the



The most important balusters, from a purely architectural point of view, are those formed of stone, and used in the balustrades which appear in Renaissance and modern Classic buildings as ornamental features, or as protections to flights of steps, terraces, or balconies. In the accompanying illustration are given the four leading types of such balusters. Fig. 1 is



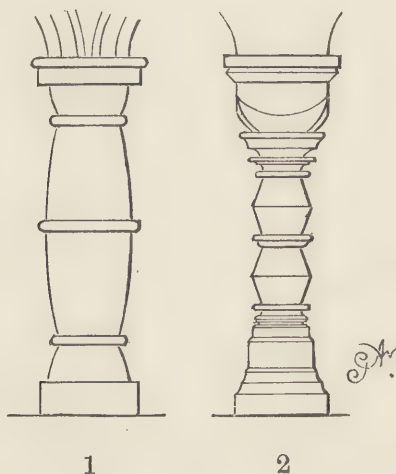
the most commonly adopted, the body of which is round and the bottom and top members square. Figs. 3 and 4 are the ordinary forms of balusters, which are square throughout. Fig. 2 is what is called the "double-bellied" baluster, round, with the exception of the bottom and top members; this is the lightest description of stone baluster, and one frequently met with in the balconies of the Renaissance palaces of Venice and other Italian cities. The double-bellied form is commonly adopted for slender wood balusters in modern works.

In such architectural details as balusters—which are introduced in great numbers, and the chief beauty of which exists in their repetition—correct taste dictates severity and simplicity of treatment. Italian and English architects of the Renaissance fully realised this fact; but the French architects, with their restless love for meretricious ornament, too frequently loaded their balusters with enrichment, most ineffective when viewed from a distance, and frequently destructive of all beauty of outline. The student who desires to learn what to avoid in the treatment of balusters should examine the sixteen illustrations of French balusters given in M. Bosc's *Dictionnaire Raisonné d'Architecture*, article *Balustre*, not one of which presents refinement in outline or enrichment.

flower of the wild pomegranate tree, a resemblance between the form of which and the architectural baluster has been discovered by some. The use of the baluster was unknown to the ancients. There is no trace of it in any of their works. Perhaps the most ancient are to be found in Italy, and it may be considered an invention which first appeared on the revival of the arts in that country. There are singular specimens of it at Venice and at Florence. The first used were generally in the shape of stunted columns, and there are many examples of it surmounted by the Ionic capital."—Note by J. Gwilt in Sir W. Chambers' *Treatise on Civil Architecture*, Lond., 1825.

For further remarks, including those of Sir William Chambers, on the subject of balusters as introduced in architectural compositions, see article *Balustrade*.

**BALUSTER SHAFT OR BALUSTER PILLAR.** The term applied to a rude description of pillar met with in the remains of the earliest period of English architecture, commonly called Anglo-Saxon, and in certain early examples of Norman work. The name is given to these shafts on account of their slight resemblance to the ordinary bellied baluster of Italian architecture. They are sometimes of a very simple design, as in Fig. 1, from the belfry lights of Earls Barton church,



Northamptonshire; or elaborately moulded, as in Fig. 2, from the eleventh century work of St. Albans abbey. Other examples exist in Wyckham church, Berkshire; St. Benet's church, Cambridge; and in the early twelfth century work of the west turrets of Tewkesbury abbey.

As we have already mentioned, in the article on Anglo-Saxon architecture, the baluster-shaft bears strong evidence of being copied from woodwork, and was in all probability reproduced direct from the roughly turned or shaped posts introduced in contemporary timber buildings. So far as it is possible for us to judge, there seems to be no likelihood of the Saxon builders having copied them from any detail in the architecture of the Romans, for the ancient Classic architects do not appear, so far as modern researches have enabled us to ascertain, to have used any object of the nature of a baluster in their works.

Baluster-shafts occupy different positions; sometimes they are placed in the centre of the thickness of the wall, carrying a block of stone, or sort of superior abacus, which extends to both sides of the wall, and from which the arches spring; at others they are placed in front of another prop of stone, or in pairs, the better to support the long abacus; and against the

face of the wall, as ornamental features only, as in one of the windows at Earls Barton church.

After the twelfth century, or indeed after the Norman work at Tewkesbury abbey, the baluster-shaft entirely disappears from English architecture.

Shafts, bulged or bellied after the fashion of balusters, are met with in certain early buildings in France, as in the church of Saint-Etienne, at Nevers.

**BALUSTRADE.** The term, in its strict sense, signifies an architectural feature formed of a number of balusters, placed in a row, at regular distances, upon a continuous base, and carrying a capping or rail. It has now, however, become the common designation of any description of ornamental railing or pierced parapet (which is not of Gothic character) in which the supports occur at regular intervals, as in the true balustrade. The French architects do not, however, limit the application of the term as we do, but on the contrary apply it to the pierced parapets of all periods of mediæval architecture, the balustrades of Palladio and the other Italian masters, and the highly ornamental specimens of similar features met with in their own Renaissance and more modern works.\*

The substance of the following remarks is derived from the able article on balustrades in Sir William Chamber's *Treatise on the Decorative part of Civil Architecture*. "Balustrades are sometimes of real use in building, and at other times they are merely ornamental. Such as are intended for use, as when they are employed on steps or stairs, before windows, or to enclose terraces, or other elevated places of resort, must always be nearly of the same height; never exceeding three feet and a half, nor ever being less than three. That so a person of an ordinary size may, with ease, lean over them, without being in danger of falling. But those that are principally designed for ornament, as when they finish a

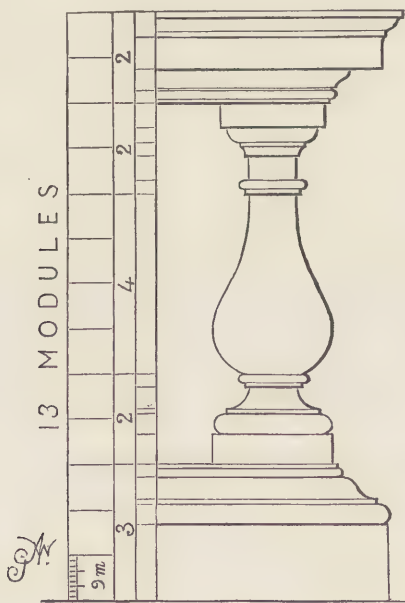
\* "BALUSTRADE, s. f. *Chancel, Gariol.* Le nom de *balustrade* est seul employé aujourd'hui pour désigner les garde-corps à hauteur d'appui, le plus souvent à jour, qui couronnent les chéneaux à la chute des combles, qui sont disposés le long de galeries ou de terrasses élevées, pour garantir des chutes. On ne trouve pas de balustrades extérieures surmontant les corniches des édifices avant la période ogivale, par la raison que jusqu'à cette époque les combles ne versaient pas leurs eaux dans des chéneaux, mais les laissaient égoutter directement sur le sol. Sans affirmer qu'il n'y ait eu des balustrades sur les monuments romans, ne connaissant aucun exemple à citer, nous nous abstenons. Mais il convient de diviser les balustrades en balustrades intérieures qui sont destinées à garnir le devant des galeries, des tribunes, et en balustrades extérieures, disposées sur les chéneaux des combles ou à l'extrémité des terrasses dallées des édifices."—Viollet-le-Duc, *Dict. Rais. de l'Arch. Française*.

**BALUSTRADE.** "Les clôtures d'appui composées de balustres devraient seules porter le nom de *balustrade*. Mais l'usage a prévalu de nommer ainsi toutes les barrières, clôtures et garde-fous ajourés qui ont un caractère monumental. Parfois les balustrades sont pleines, comme les garde-corps, les parapets simples; mais elles se distinguent de ces derniers par une décoration d'ajours aveugles. On a fait des balustrades en pierre, en bois et en métal, et la configuration de leurs ajours a varié à l'infini, suivant la matière employée et le goût prédominant au moment de leur construction."—E. Bosc., *Dict. Rais. d'Arch.*



building, or even for use and ornament, as when they enclose the passage over a large bridge, should be proportioned to the architecture they accompany; and their height ought never to exceed four-fifths of the height of the entablature on which they are placed; nor should it ever be less than two-thirds thereof, without counting the zoccolo or plinth; the height of which must be sufficient to leave the whole balustrade exposed to view, from the point of sight for the building. Palladio has in some of his works made the height of the balustrade equal to that of the whole entablature, and Inigo Jones has followed his example in many of his buildings, particularly at the Banqueting House; where, besides this extraordinary loftiness, it is raised on a very high plinth." Neither Palladio nor Inigo Jones should be followed in this practice, for by it the balustrade is rendered too prominent and weighty for the rest of the composition, and particularly for the entablature it surmounts.

Sir William Chambers, whose correct judgment on matters of this kind few English architects will question, gives the following proportions for the ordinary balustrade, formed of such balusters as are represented in Figs. 1,



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3 and 4, in our article *Baluster*. "The best proportion for balustrades of this kind, is to divide the whole given height into thirteen equal parts, and to make the height of the baluster eight of those parts, the height of the base three, and that of the cornice or rail two," as in Fig. 1. "Or, if it should be required to make the baluster less, the height may be divided into fourteen parts, giving eight of these to the baluster, four to the base,

and two to the rail: one of the parts may be called a module, and being divided into nine minutes, serve to determine the dimensions of the particular members," as indicated in Fig. 1.\* Double-bellied balusters (see Fig. 2, in article *Baluster*) are most suitable for balustrades of balconies, or in compositions of which the parts are small in scale and have delicate profiles. The base and rail of these balustrades must be less in their proportions than those used with the single-bellied balusters, as above given. The height of the balustrade should be divided into fourteen modules, nine being given to the double-bellied baluster, three to the base, and two to the rail.

In the *Treatise* the following directions with reference to the positions of balusters and pedestals are given; and they are well worthy the attention of students of architecture:—"In balustrades, the distance between two balusters should not exceed half the diameter of the baluster, measured in its thickest part, nor be less than one-third of it. The pedestals that support the rail should be at a reasonable distance from each other; for, if they be too frequent, the balustrade will have a heavy appearance; and if they be far asunder, it will be weak. The most eligible distance between them is, when room is left in each interval for eight or nine whole balusters, besides the two half ones engaged in the flanks of the pedestals. But as the disposition of the pedestals depends on the situation of the piers, pilasters, or columns in the front, it being always deemed necessary to place a pedestal directly over the middle of each of these; it frequently happens that the intervals are sufficient to contain sixteen or eighteen balusters. In this case, each range may be divided into two, or, which is better, three intervals, by placing a die or two dies in the range, each flanked with two half balusters. The breadth of these dies may be from two-thirds to three-quarters of the breadth of those of the principal pedestals. It will be best to continue the rail and base over and under them in a straight line, without breaks; for frequent breaks of any kind, tending to complicate without necessity, are defects; and most so when of different dimensions, because they then complicate more, and serve to render the confusion greater.

"The breadth of the principal pedestals, when placed on columns, or pilasters, is regulated by them, the die never being made broader than the top of the shaft, nor ever much narrower; and when there are neither columns nor pilasters in the compositions, the die should never be much broader than its height, and very seldom narrower: on the contrary, it is often judicious to flank the principal pedestals on each side with half dies, particularly where the ranges are long, and divided in the manner above-mentioned, as well to mark and give consequence to these pedestals, as to support the ends of the rails, and give both apparent and real solidity. In

\* In the edition of the *Treatise*, published in 1825, by Priestley & Weal, London, a plate is given containing several examples of balustrades and balusters carefully figured in modules and minutes.

such case, these principal pedestals must break forward more or less as the nature of the design may require, and the base and rail must profile round them.

“On stairs, or other inclined planes, the same proportions are to be observed as on horizontal ones. It is indeed sometimes customary to make the mouldings of the balusters follow the inclination of the plane; but this is difficult to execute, and when done not very handsome, so that it will be better to keep them always horizontal, and shape the abacus and plinth in the form of wedges, making their height, at the axis of the baluster, the same as usual. The distance between two balusters on inclined planes must not be quite so much as when they are in a horizontal situation; because the thickest parts do not then come on the same level. Le Clerc thinks it best to finish the inclined balustrades of stairs or steps with horizontal pedestals, placed on the floor or pavement to which they descend.

“As the intention of balustrades is properly to enclose terraces, and other heights to which men resort, in order to prevent accidents, it is an impropriety, as D’Aviler observes, to place them on the inclined cornices of pediments; as at St. Susanna, and St. Maria della Vittoria, near Diocletian’s baths at Rome, or in any other places where it is not apparently, at least, practicable for men to walk.”

Of the so-called balustrades, formed of slabs of stone pierced and carved into various patterns, it is unnecessary to speak at any length. They were favourites with the French architects of the Renaissance; and appeared in our Elizabethan buildings, and in certain later works of the Italian school. The *Treatise* concludes its article on balustrades with the following sentence:—“In interior decorations it is sometimes customary to employ, instead of balusters, certain ornaments, called Frets, or Guilloches; but it will be advisable to use them sparingly; for representing leaves, ribands, and flowers, they do not carry with them any idea of strength, and appear therefore not calculated for a fence or anything to lean upon.”

In several of the palaces of Venice, and important edifices of other Italian cities, balustrades are to be found formed of dwarf pillars, with bases and capitals, supporting moulded rails. This description of balustrade was introduced by the mediæval architects, who designed them sometimes with small trefoiled or plain pointed arches between the capitals of the pillars and the rail, and at other times with the rail resting directly upon the capitals.

When a balustrade is introduced as an ornamental feature against or attached to a wall, it is designated a FALSE-BALUSTRADE.

Italian writers have sometimes used the term BALUSTRATA (which is the equivalent for our word balustrade) for a chancel-screen.\* Late Latin authors have employed the term BALUSTRUM with the same signification.

\* Pistolesi, in his work *Il Vaticano Descritto* (Rome, 1838, p. 118), uses the term in describing the screen of the Sistine chapel.



**BAMBINO.** (*Ital.*) The name commonly given, in the language of art, to the representation of the infant Saviour, wrapped tightly in swaddling clothes and bound round by ligatures; as infants usually are dressed by Italian mothers. The bambino frequently appears in Italian art, surrounded with radiance and occasionally by adoring angels.

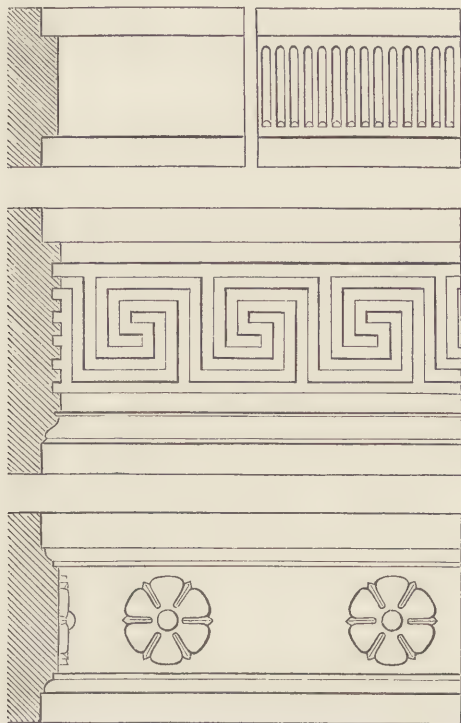
**BAMBOCCIATA.** The term, derived from the Italian, employed by artists to designate a class of compositions in painting which, as Fairholt remarks, "represent nature in an every-day rustic and homely manner, embracing the most ordinary actions of life, such as fairs, festivals, &c., and, unlike the elevated style of painting, does not abstract from natural accidents and deformities without seeking to exaggerate the whims of nature, but, on the contrary, applies itself to represent her *naively*, and herein the BAMBOCCIATA ranks higher than compositions of GROTESQUE figures, with which it must not be confounded. This particular style of GENRE painting was practised by Teniers, Van Ostade, and Brower, but Peter Van Laar first introduced it into Rome about the year 1626; he, on account of his deformity, was called IL BAMBOCCIO, or the Cripple, and fixed his unfortunate *soubriquet* to the style in which he excelled. Painting can only admit of bambocciata in the same way that it does the grotesque—employing in it only figures of small size. Sculpture absolutely rejects both."

**BAND.** In strict architectural nomenclature, the term band signifies any flat member or fascia, projecting, or otherwise separated, from the general surface of a wall, and usually carried in a horizontal direction. A band may be perfectly plain, or may be decorated with any description of surface enrichment, sunk or in low relief, or it may be moulded at one or both of its edges, as in the four examples given in the accompanying illustration, Fig. 1. It may also consist of a course of a differently coloured material built into the wall, flush with its surface. When bands are quite flat and plain they are designated PLAT-BANDS, and are understood to have only a slight projection. The term band is also used in speaking of any plain fascia or slightly projecting flat member upon which or to which any description of ornamentation, not strictly part of itself, is attached. Thus, the square member under the triglyphs in the Doric entablature, and to which the guttæ are attached, is sometimes called the GUTTÆ-BAND.\*

Flat members, in the forms above described, introduced round the shaft of a column, pilaster, or pier; or placed across groups of vertical mouldings, architraves, or such-like architectural features, are commonly termed

\* "BAND. A term used to express what is generally called a *Face* or *Fascia*. It more properly means a flat low *square profiled* member, without respect to its place. That from which the Corinthian or other modillions, or the Dentils project, is called the Modillion Band, or the Dentil Band, as the case may be."—Gwilt's Glossary of terms in Sir William Chambers' *Treatise on the Decorative part of Civil Architecture*. Lond. 1825.

bands. (See *Banded Architrave* and *Banded Shaft*.) But the term band cannot be correctly applied to the bagues or annular mouldings which are introduced in the shafts and pillars in mediæval architecture. These features, usually richly moulded, and of considerable projection, cannot



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on any grounds be designated bands, although the term has frequently been applied to them by English architects. (See *Annulated Shaft* and *Bague*.)

The ordinary horizontal bands on walls sometimes closely approach, in appearance, the other architectural features known as *strings*. The difference between a band and a string chiefly lies in their respective projections, from the surface of the wall, in proportion to their depths. Any moulded member which approaches or exceeds half its depth in projection is more correctly designated a string than a band. Besides this, the chief characteristic of a string is a completely moulded contour; that of a band is flatness, extending throughout or over the greater part of its surface. The band is a feature which belongs to Classic and Renaissance architecture; the string is a characteristic feature of mediæval architecture.

In decorative art, the term band is used to designate any horizontal strip separated from a general wall surface by parallel lines, and filled in

with some special pattern, with the view of accentuating it, or any similarly treated strip painted round a shaft or pier, or across a rib, beam, or group of mouldings. Bands are common enrichments in mediæval painted decoration; and may be introduced with effect in any school of

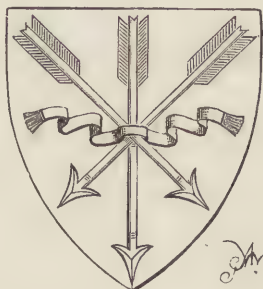


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decoration when large surfaces of wall have to be relieved; or where differently coloured surfaces have to be separated in an artistic manner. At A, Fig. 2, is shown an ordinary type of painted band, dividing a uniform wall pattern.

In heraldry, the term is applied to a sort of ribbon or strip of some flexible material wherewith anything is bound, or a group of objects, forming a crest or charge, is tied together. (See *Banded*.)

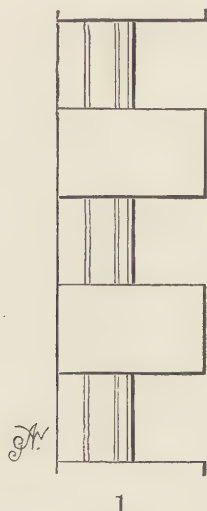
**BANDED.** In heraldry, any object or group of objects tied round or



bound together with a band or ribbon of any flexible material is described as banded. (Example—*Argent, three arrows, proper, banded.*)



**BANDED ARCHITRAVE.** The upright architrave of a door, window, or other opening, across which, at regular intervals, are placed horizontal bands, plain, rusticated, or decorated with surface enrichment, as in the accompanying illustration, Fig. 1, from the design of a window, believed to have originated with Inigo Jones. Banded architraves were used by him and his imitators.



The propriety and good taste of thus interrupting the mouldings of a feature, whose chief beauty lies in its uniformity and continuity, are more than doubtful. Such a treatment could never have suggested itself to the Grecian or even to the Roman mind of Classic times; and, indeed, it could only have arisen in a restless desire for novelty, or in the wish to introduce something to mark a talent for invention, at a time when refinement of taste and catholic appreciation of art were not distinguishing characteristics amongst architects or their patrons.

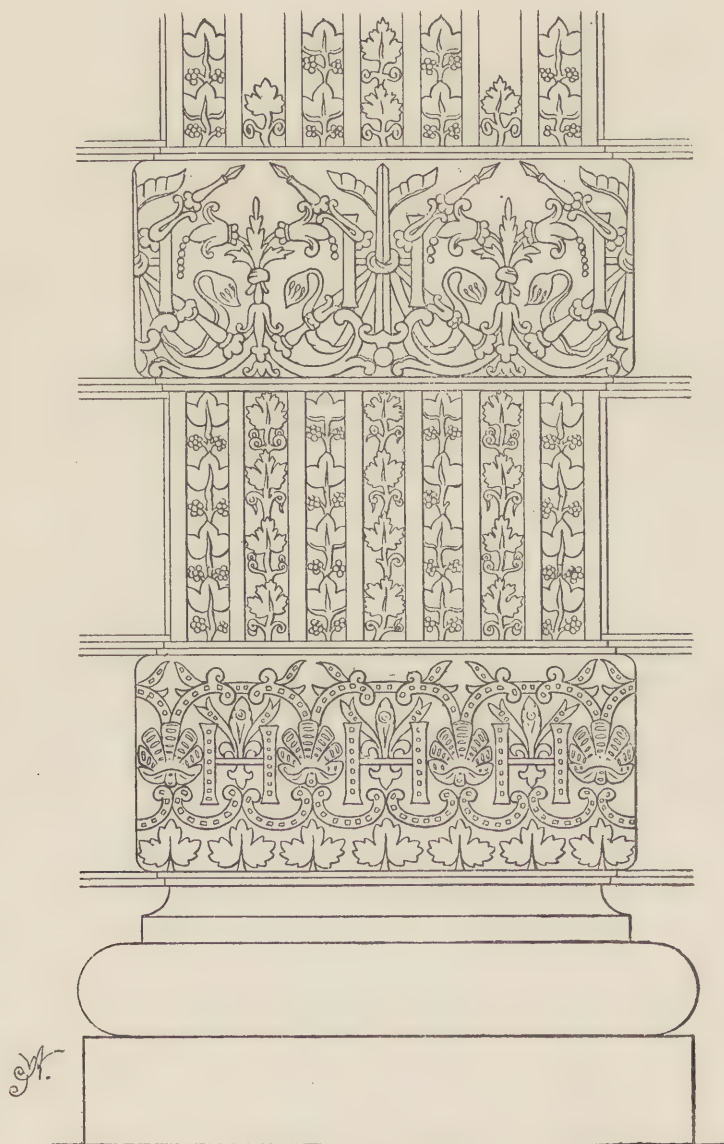
**BANDED SHAFT.** The shaft of a column or pilaster around or across which are introduced broad flat bands, of slight projection. These bands have, by Sir William Chambers and other writers on architecture, been designated "CINCTURES," a term by no means inappropriate, though not more expressive than the more frequently used word, band.

It is somewhat difficult to account for the favour in which the banded column was held by many architects, in most matters relating to their art unquestionably men of taste and refinement; for we cannot acknowledge the display of ordinary judgment or taste in a column, whose feeling of dignity, simplicity, and strength is entirely destroyed by the numerous projecting bands, which cut it into a series of short divisions, alternately of greater or less diameter, and accordingly destroy all its true architectural expression and simple beauty.

The earliest known example of a banded shaft is that of the Persico-

Byzantine column, at Ancyra, supposed to have been erected about the fourth century, in honour of the emperor Julian or Jovian.

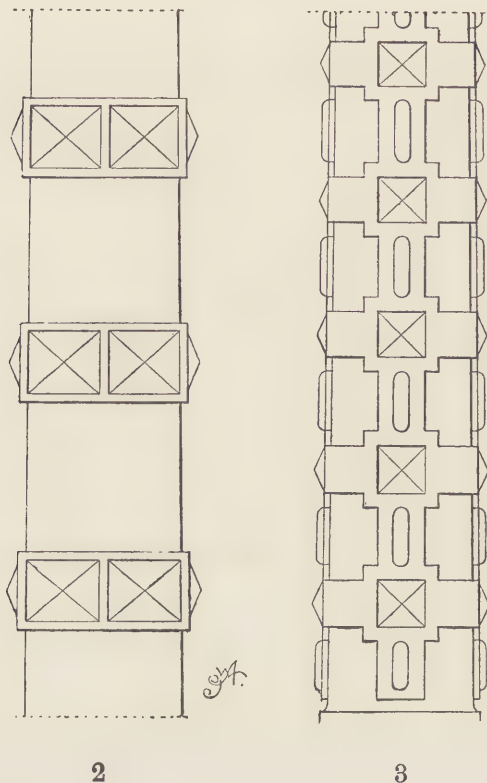
Probably the finest examples of banded shafts are those of the Renaissance façade (sixteenth century) of the Louvre, at Paris. In Fig. 1 is



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given a drawing of the lower part of one of the pilasters of this façade, with its richly sculptured bands. Banded shafts may be looked upon as characteristic features of Renaissance architecture. They also appear,

in a peculiar treatment, in our Elizabethan style, as in the accompanying illustrations, Figs. 2 and 3, from Holland House, Kensington; and, in a much less artistic form, in the later Italian or revived Roman architec-



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ture. The works of Inigo Jones and his followers present numerous examples, none of which are satisfactory, however, from an artistic point of view.

**BANDELET or BANDLET.** The diminutive of the term band; employed to designate a narrow flat member of slight projection, exceeding the ordinary dimensions of a fillet but not approaching to the importance of a band, and applied to wall surfaces, columns, pilasters, or mouldings in the same manner as the band. (See *Band*.)

**BANDOLEER.** A belt of leather to which were attached or suspended twelve small cases or tubes of metal or wood, furnished with moveable caps or covers, for containing twelve charges of gunpowder. The bandoleer was worn over the left shoulder by musketeers during the latter half of the sixteenth and the greater part of the seventeenth centuries. At the close of the latter period the bandoleer was superseded



by the cartridge-box. When the musket had to be loaded, the contents of one of the bandoleer cases were emptied into the barrel and rammed down; the bullets were carried in a pouch or bag, usually attached to the bandoleer.\*

**BANK.** A building or portion of a building in which the business of a banker is carried on. The chief portion of the establishment is the office in which the public business of the bank is transacted; this should be a spacious, lofty, well-lighted, and thoroughly warmed and ventilated apartment, designed with the view to more or less architectural display, according to the position and importance of the bank; and fitted up in a thoroughly substantial manner, with counters, screens or low partitions, and desks, for the convenience of the public and the several officers and clerks employed.† Opening from the office should be two or more rooms, one of which should be fitted up for the manager, with a second door, either from the entrance vestibule, or a small anteroom, through which visitors may enter or leave without the necessity of going through the public office. The manager's room is commonly designated the bank parlour. Another room should be fitted up as a board room for the meetings of the directors. This should adjoin and communicate with the parlour. Safes of the most secure description have to be fitted for the reception of money and deeds. In the basement, vaults or cellars must be provided, constructed so as to be perfectly dry and fireproof; and thoroughly heated and ventilated so that the books and papers stored therein may receive no damage; they must be well lighted by gas, and fitted with iron grated and burglar-proof doors. Connected with the bank offices should be the residence of the manager, one door only giving communication. His bedroom should be so placed that any noise made in the office at night could be easily heard by him. For further particulars relative to the proper arrangement and appointment of banks, see Gilbert's *Practical Treatise on Banking*, London, 1849; and Sharp's *Gilbart Prize Essay on the Adaptation of recent Discoveries, etc., to the purposes of Practical Banking*, London, 1854.

**BANKER OR BANCOUR.** (Fr. *Banchier*.) The term used by old writers for the covering of tapestry or stuff laid over a seat, either in the

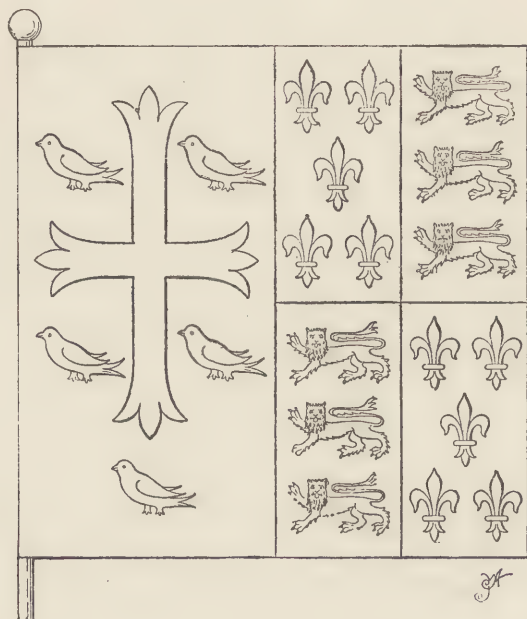
\* "To a musketeer belongs also a bandelier of leather, at which he should have hanging eleven or twelve shot of powder, a bag for his ball, a primer, and a cleanser."—Turner, *Pallas Armata*.

† "It is desirable at all times to make those arrangements that shall best promote the convenience of the public. The counter should be readily accessible and of sufficient length to meet the requirements of the business; and the cashiers' desks upon it sufficiently wide apart for the public to be promptly served and to stand without jostling one another. Some banks have two counters, one for paying and the other for receiving money. It is especially desirable that the ledger keepers should be placed immediately behind the cashiers. The desk of the chief or head clerk should be placed in such a position that he can see all over the office."—*Dict. of Arch.*, Arch. Pub. Soc., Lond.

form of a cushion or a simple cloth. It appears to have also been used for a curtain or hanging.\* In late Latin work the term is sometimes written *BANCARIUM*, *BANCAL*, *BANCHALE*, or *BANCHALIS*.†

At the present day the word *banker* is commonly applied to the bench or low table on which masons and bricklayers prepare and shape their respective building materials.

**BANNER.** In correct heraldic nomenclature, the term *banner* is used to designate a description of flag, square in form, or nearly so, charged only with the full coat of arms of its owner. It was borne by sovereigns,



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princes, barons, and knights bannerets, who were higher in rank than the ordinary knights of mediæval chivalry. In Fig. 1 is shown the

\* "BANKER. A covering for a bench; hangings of cloth; the side-curtains of an altar."—Walcott, *Sacred Archæology*. *BANCARIUM*, a covering of tapestry; curtain."—*Church and Conventual Arrangement*.

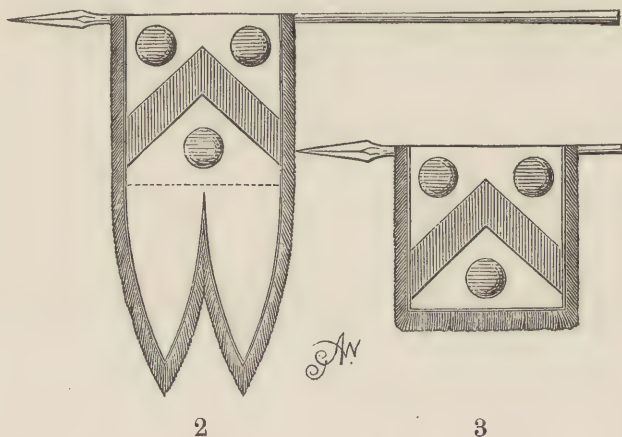
† "BANCAL, Tapes, quo *bancus* seu *scamnum* insternitur. Inventar. an. 1476. ex Tabul. Flamar. *Unius scamni sive Bancal lanæ virgati sive vetati*.

"BANCHALE, BANCHALIS, Tapes, quo *bancus* seu *scamnum* insternitur, nostris *Banchier* & *Banquier*. Testam. an. 966. in Append. ad *Marcam Hispan.* col. 887. *Et ad sancto Justo sedis Narbonæ Banchale uno meliore*. Aliud an. 1010. *ibid.* col. 973. *Banchales duas, & cortina una*. Charta an. 1355. in Reg. 84. Chartoph. reg. ch. 153. *Item v. Banchiers vers, à oiseaux & à feuillettes*. Inventar. bonor. ducis Bitur. an. 1416. ex Cam. Comput. Paris, fol. 7. Vº. *Item un grant Banquier eschaqueté de vert, bleu & rouge, à plusieurs royes d'or*."—*Glossarium Novum ad Scriptores Medii Ævi*. Paris, 1766. (Supplement, by Carpentier, to Ducange's *Glossarium*.)

correct form of the banner, charged in this example with the arms of Richard II. It is taken from the brass of Sir Symon de Felbrigge, K.G., the king's banner bearer. The banner shows the royal arms quartering France and England, and impaled with the arms of Edward the Confessor.

The great banners borne at funerals of sovereigns and noblemen display all the quarterings of their respective arms, and correctly vary in dimensions according to the rank of the deceased. The banner of a sovereign should be five feet square; that of a prince and duke, four feet square; that of all noblemen of lesser rank, three feet square.

The pennon borne by knights, attached to their lances, terminated in points or tails, and had their arms or cognizances painted or embroidered upon the portion between the tails and the shaft. A custom obtained during the middle ages, whilst chivalry was at its height, by which the rise in rank of a knight, on the field of battle or on any occasion to mark a valiant exploit, was immediately proclaimed by the alteration of his tailed or pointed pennon into a square banner. This was performed by



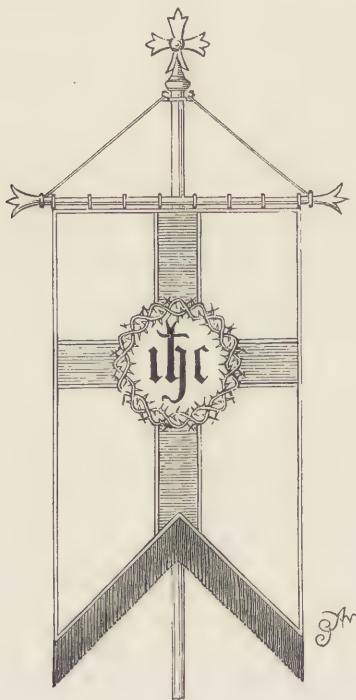
the sovereign, or his general in command, cutting off the tails and leaving the portion adjoining the lance on which the arms or cognizance was displayed. Figs. 2 and 3 show the flag before and after the operation; the former is a pennon of an ordinary knight; the latter is a banner of a knight banneret.

With reference to the royal banners of England, Mr. Boutell remarks:—"The royal banners of England have always borne the same blazonry as the royal shields. The earliest blazon of a royal banner of which I am aware, appears in the Roll of Caerlaverock, A.D. 1300. The chronicler styles the animals '*Leopards*,' and not '*Lions*;' and he uses the descriptive epithet '*courant*' instead of *passant*. The royal banner of Edward I., the chronicler of Caerlaverock describes after this characteristic manner: 'On his banner were three leopards courant, of fine gold, set on red; fierce were they, haughty and cruel, thus placed to signify that, like



them, the king is dreadful to his enemies. For his bite is slight to none who inflame his anger ; and yet, towards such as seek his friendship or submit to his power, his kindness is soon rekindled.\*

“Edward III., on his *standards*, placed his quartered shield at their head, and powdered them with fleurs-de-lys and lions. Several of the sovereigns, in addition to the banner of the royal arms, used other banners and standards charged with their badges. It is to be observed that the



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royal banners of arms charged their insignia upon their *entire field*, without any accessories, until the time of the Stuarts, when the arms were sometimes either associated with other devices, or the flag bore the *entire royal achievement* charged upon the centre of its field. Curious examples of royal standards thus emblazoned appear in the pictures, now at Hampton Court, representing the embarkation of Charles II., in 1660, and of William III., in 1688. More recently, the royal banner has always displayed the arms of England, after the early habit, blazoned over its entire field, and without any accessory.”

\* “The Roll of Caerlaverock gives the Blazon of the Banners of nearly one hundred of the Nobles and Bannerets who were present with Edward I. in his campaign against Scotland in 1300. The first on the Roll is the Banner of Henri de Laci, who is thus introduced by the chronicler :—‘ Henry the good Earl of Lincoln, burning with valour, which is the prevailing sentiment of his heart, the Leader of the First Division, had a Banner of yellow silk with a purple Lion rampant.’”—Boutell. *A Manual of Heraldry*. Lond., 1863.

The national banners of England, Scotland, and Ireland present severally the crosses of St. George (*gules, upon a field argent*), St. Andrew (*cross-saltire, argent, upon a field azure*), St. Patrick (*cross-saltire, gules, upon a field argent*). The union of these three banners produced the Union Jack. (See *Flag*.)

Our military banners, strictly speaking, are those carried by the cavalry, which, however, are commonly and incorrectly termed standards. They are of small dimensions, coloured according to the colour of the regimental facings, and charged with certain insignia, numbers, and words of honour. The banners of the household cavalry are uniformly crimson, embroidered with the royal insignia.

Ceremonial banners were frequently formed of the richest materials, silks and cloths of gold and silver; and were surrounded with gold, silver, or coloured silk fringes, and sometimes sewn with pearls and studded with precious stones.

The term banner is also commonly applied to the elaborately embroidered pieces of silk or other rich material, suspended by cross bars, pendant wise, from long poles, and carried in ecclesiastical processions. They are generally longer than they are broad, and terminate with a straight fringed edge, or are pointed or tailed in various fashions like a mediæval pennon. An example of an ordinary form is given in Fig. 4.

**BANNEROLL or BANDEROLLE.** This term is used with different significations. It appears, however, to be most correctly applied as the diminutive of the term banner, to a small square flag, which, unlike the banner proper, is charged with a portion only of a coat of arms. When carried at funerals several bannerrolls may appear, each containing the arms of one of the matches of the deceased's ancestors. The number of quarterings in the banner usually dictates the number of bannerrolls required, each one being charged with a separate quartering. They are formed of the same materials as the banner; and are usually heavily fringed with gold, silver, or coloured silk, agreeing with the tinctures used in the field and charges. According to Planché, the term signifies:—"a little streamer attached to the head of a lance, as even to this day may be seen fluttering in any regiment of lancers, English or foreign." It has also, but not so frequently, been used to designate an ornamental ribbon or wavy band bearing an inscription, often introduced in the sculptured and painted decorations of Renaissance and later buildings. When applied in this sense, the term should be written *banderolle*.

**BANQUETING ROOM.** The term now applied to a large apartment constructed for the purpose of state and ceremonial banquets or dinners.\* (See *Dining Room*.)

\*"BANQUETING ROOM. A term peculiarly English, which originally did not mean as at present a place prepared for state dinners, but an apartment for the display of a 'refection,'

**BANQUETTE.** A term derived from the French language, and used occasionally by English writers, with three different significations. It is generally, however, applied to a narrow elevated footway running along a canal, aqueduct, or carriage-way. It is also used to designate a narrow window-seat; and in furniture is applied to the slightly elevated portion at the back of a buffet, on which crystal and plate are displayed.

**BAPTALERIUM OR BATATORIUM.** The term used by mediæval authors for a bark-mill or a fulling-mill, commonly attached to large monastic establishments. In the plan of the abbey of St. Gall (see article *Abbey*) both curriers' and fullers' workshops are marked. Ducange gives several other modes of spelling the term, and illustrates their indiscriminate use by mediæval writers.\*

**BAPTISMAL FONT.** The vessel employed for containing the water used in the rite of baptism. This vessel, whatever its form may be, is commonly designated by the simple term *Font*. (See *Font*.)

**BAPTISTERIUM OR BAPTISTERY.** The original signification of the term baptisterium was a place for bathing. It is used by Pliny with this signification: speaking of it in connexion with the frigidarium of the public bath, he says:—"Inde apodyterium balinei laxum et hilare excipit cella frigidaria in qua baptisterium amplum atque opacum." Pliny the younger and others use the term "piscina" for this cold water receptacle. A good example of the baptisterium of the ancients is furnished in the remains of the lesser baths at Pompeii; it occupies the centre of a circular apartment which opens from the apodyterium. Gell describes this apartment with its baptisterium or piscina in the following words:—"This is perfectly preserved, and nothing but the water is wanting, which anciently gushed from a copper pipe opposite the entrance about four feet from the floor, and fell into the cistern, being supplied by pipes yet to be traced from

as it was properly termed, in which fruits and wine were chiefly served: JOHNSON, *Dict.*, 4to., Lond., 1817, s. v. banquet. The corporation of London had such a banqueting room built at Tyburn, whither, after the members had dined together in the city, they conducted their families for an afternoon's dessert. Such rooms, like that built temporarily by GERBIER for himself in 1628, were occasionally used for the performance of a play or masque. The banqueting room at Kensington was commenced directly after the death of William III., and finished about the year 1705. It was originally divided into three rooms adorned with Corinthian pillars, friezes, and niches for statues bearing girandoles. There is a circular room at each end, one intended for a drawing room, the other for a music room, the middle apartment was a ball room."—*Dict. of Arch.*, Arch. Pub. Soc., Lond.

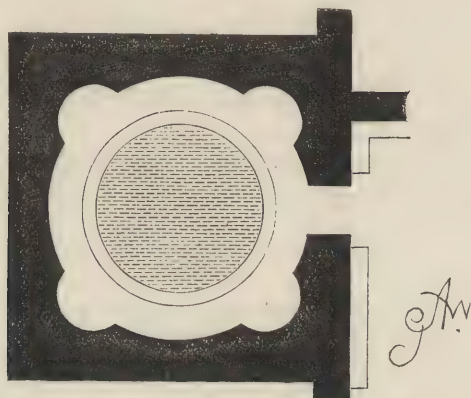
\* "BAPTALERIUM, BAPTENTORIUM, Molendinum ubi tunduntur panni. Statuta Monast. S. Claudii an. 1448. Item & per Petrum Vandalo super uno molendino & Baptentorio, dimidium grossum. Ibidem quater repetitur semper adjuncta voce Molendinum. Vide Batatorium.

"BATATORIUM, BAPTITORIUM, BATANDERIUM, BAPTALERIUM: voces unius ejusdem originis & notionis: Battuarium, *Batan de Pannos*, Hispanis, ubi panni tunduntur: *Moulin à draps*, nostris. Charta Hugonis Comitis Trecentis ann. 1101. apud Chiffletium in S. Bernardi genere asserto: *Et quod in finagio prædicti castri nullus unquam molendina, Batatoria, vel alia usuaria faciat.*"—Ducange. *Glossarium*.



the great reservoir near the *præfurnium*. This apartment is a circle enclosed by a square, in the angles of which are four alcoves, called by the ancients *scholæ*, a word derived from the Hebrew, and signifying repose. Some have given the name of *schola* to the platform round the bath in which visitors waited, but there seems little doubt that the *schola* was generally a hemicycle connected with that platform.

"The diameter of the circle is eighteen feet six inches. Round the whole runs a walk or ambulatory two feet four inches and a half wide. The *piscina* or vase itself is twelve feet ten inches in diameter, and has a seat eleven inches wide surrounding it at the depth of ten inches below the lip, and two feet four from the bottom, allowing a depth of water equal to about three feet. There was a channel to get rid of the superfluous water, and a low step at the bottom to assist in getting out of the water.



1

The alcoves, or *scholæ*, are five feet two inches wide, by two feet half an inch deep. Their arches, which rise to the height of one foot eight inches, spring from a point five feet six inches above the floor. The whole of the *piscina*, or *natatio*, with its seat or step, the pavement of the *scholæ* or ambulatory, is of white marble, and in perfect preservation.

"The roof is a dome, or rather a cone, of which a small part of the summit is destroyed, having, in fact, risen above the accumulated soil of so many centuries. It appears to have been painted blue, and had an opening or window near the top toward the south-west, possibly not glazed, as, being a cold bath, the increase of temperature was not required. . . .

"The cistern, or bath, in this apartment was decidedly that termed *piscina* by Cicero, when, in writing to Quintus, his brother, he observes, '*Latiorem piscinam voluisssem ubi jactata brachia non offenderentur.*' This passage is scarcely applicable to any vessel except one in which the whole body might be placed."

The plan of this apartment, Fig. 1, with its baptisterium in the centre, appears to us to form the most appropriate opening illustration in the present article. Although constructed simply for the purpose

of cold water bathing, and without the remotest connection with the Christian rite of baptism, it, along with many others which were doubtless built by the ancients in a similar form, may have suggested the simpler plan of Christian baptisteries. A more appropriate form could hardly be devised. As we shall show later on, baptisteries with a basin or font in the centre, and four semicircular alcoves or niches, were in all probability of frequent occurrence in early Christian times; but the octagonal form was in most cases preferred to the circular in the general plan of the apartment.

The baths from which the above plan is taken were excavated in the year 1824; and although up to 1857 they remained the only ones brought to light, they were of too humble dimensions to be looked upon as the only baths, or even among the more important public establishments of the kind, in the city. In the latter year, baths on a much larger scale were discovered. These have been designated the Stabian baths, or the Great *Thermae*. In these we find the baptisterium enclosed in a circular apartment with the four niches, and in all other essentials similar to that above described and illustrated.

The names given to the cold water receptacle, in addition to BAPTISTERIUM, are PISCINA, NATATIO, NATATORIUM, and PUTEUS.

We now leave the baptisterium of the ancients and enter upon the consideration of that designed for Christian uses.

In the early epoch of the Church, the Latin term, baptisterium, was applied to the vessel or tank which contained the water for baptism, but later on it was used to designate the building set apart for the celebration of the rite, and which contained the font or water vessel. This building or apartment was also called DOMUS ILLUMINATIONIS and AULA BAPTISMATIS.

At first Christians were baptised in any convenient pool or stream of water;\* and it appears that prior to the middle of the second century no special places were set apart for the rite. About the end of the following century, however, special buildings were erected, belonging to, but detached from, churches, and entirely devoted to the celebration of the sacrament of baptism. These contained the font and an altar, for from very early times until about the eleventh century it was the custom of the Church to administer the Eucharist to all who had been baptised.†

Martene informs us that during the early centuries of the Church the only recognised mode of baptism was by immersion of the whole body, sometimes accompanied by aspersion. This rendered the provision of large receptacles for the water necessary, and, accordingly, the erection of suitable buildings to enclose them. Prior to the tenth century there were

\* "The early Christians were baptized in water by the roadside (Acts viii. 36-38); or in a river (Acts xvi. 13-15); or a prison (Acts xvi. 33); in a spring, or at sea, or in private houses (Acts ix. 18; x. 47, 48), or in any place. Bede mentions Paulinus baptizing in the Swale; at Rome there was an early baptistery in the house of Cyriacus, in the Pontificate of Marcellus."—Wallcott. *Sacred Archaeology*.

† Martene. *De Antiq. Eccl. Rit.*

special seasons of the Church's year appointed as more appropriate for the rite; these were Easter, Pentecost, and Epiphany. At these feasts, therefore, great numbers of persons congregated, both as applicants and spectators, and had to be properly accommodated; these facts, combined with the important nature of the sacrament, dictated the erection of very spacious baptisteries, distinct from the attendant churches, which were at such times crowded with other worshippers. It was doubtless such considerations that, for so many centuries, kept the font or piscina out of the basilica or church proper. At what date the font was introduced into the porch or western part of the church is not clearly decided, but it is generally allowed that the change did not commence prior to the sixth century, and that it became by no means usual in churches before the ninth.

In the generality of Italian cities only one baptistery was allowed, and it served for the whole diocese. It usually adjoined and was acknowledged to belong to the cathedral, as at Florence and Pisa even to the present day. In Rome things appear to have been different; baptisteries were attached to several if not all the parish churches there. "During the 8th and 9th centuries baptisteries continued to be in full use in Italy, as we may learn from the *Lib. Pontif.*, where mention is made of the building or rebuilding of five baptisteries attached to churches in Rome, between A.D. 772 and A.D. 816. In one of these cases, that of S. Andrea Apostolo, rebuilt by Pope Leo III. (795-816), we are told expressly that the place was too small for the people who came to baptism, and that the Pope therefore built a circular baptistery 'ampla largitate,' that he also enlarged the 'fons' and decorated it with porphyry columns round about."\*

Apart from the distinct purpose for which they were designed, baptisteries have frequently been used as the meeting places of large ecclesiastical councils and other religious assemblies.

The earliest known example of a baptistery, as a place constructed and exclusively used for the rite of baptism, is that of the cemetery of St. Pontianus, in the catacombs of Rome. A plan and section of this interesting subterranean baptistery, which was doubtless long used by the early Christian converts during times of persecution, are given in Fig. 2, and a perspective view in Fig. 3.†

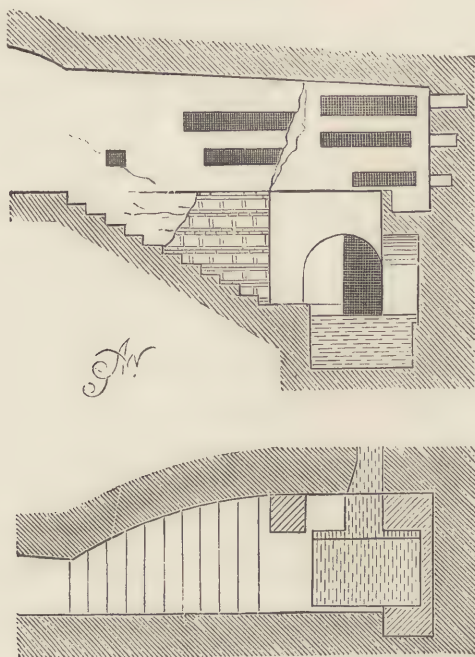
It is in the form of a small chamber, approached from the higher level of the ordinary passages of the catacomb by a flight of steps. The piscina is a quadrangular cistern about four feet deep, supplied by a small stream of water, which enters through a tunnel on the left side. Between the bottom step and the edge of the piscina is a platform about five feet wide, on which the priest stood whilst baptising the convert. At the back of the piscina is an arched recess containing the painting of a cross, the

\* A. Nesbitt, F.S.A., in *Dict. of Christ. Antiq.*

† From D'Agencourt's *History of Art by its Monuments.*



stem of which is throwing out leaves and flowers. A lighted candelabrum rises from each of the arms of the cross, whilst below are suspended the  $\alpha$  (*alpha*) and  $\omega$  (*omega*). There is little doubt as to the signification of the lighted candelabra—they allude to the divine illumination of the



## 2

Christian soul which attended the sacrament of baptism. We have already mentioned that one of the appellations given to a baptistery in early times is *the house of illumination* (*domus illuminationis*). Baptism itself was sometimes called *illumination* ( $\phi\omega\tau\acute{\iota}\sigma\mu\omicron\varsigma$ ). Above the arch is a painting of the baptism of our Saviour, the most appropriate subject which could have been selected; and the appearance of which, in the position it occupies, has satisfactorily decided the use of the chamber and its water receptacle.

From this primitive, and what may be designated secret, baptistery, there is but one step to the important ones erected by Constantine or in his time, and of which some records exist.\*

\* "Of the construction of baptisteries in the time of Constantine the Great we have abundant proof. The anonymous pilgrim of Bordeaux, who visited Jerusalem c. A.D. 334, when speaking of the basilica which Constantine had just built at the Sepulchre of our Lord, says, that by its side were reservoirs for water, and behind it a bath where children were 'washed' (*balneum a tergo ubi infantes lavantur*), that is, no doubt, baptized. Eusebius evidently includes a baptistery among the Exedrae of the Church of Paulinus at Tyre, and Paulinus of Nola (*Ep. 12, ad Severum*) says that Severus built a baptistery between two basilicas. Cyril of Jerusalem speaks of the baptistery as having a porch or anteroom,

The earliest baptistery in the form of an important building, of which there are any remains, is that commonly called the baptistery of Constantine, adjoining the church of St. Giovanni Laterano, at Rome. There is some uncertainty regarding the date of its construction. Gally Knight says:—"That this Baptistery cannot be justly entitled to the



## 3

name which it bears, is sufficiently evident from the well-attested fact that Constantine, though he declared himself a Christian, postponed the rite which was believed to wash away the stain of every sin, till he found his end approaching, and then was baptised, not at Rome, but at Constantinople. In fact this Baptistery was not constructed till the pontificate of Sixtus III., who died in 440. Anastasius\* says that it was he who placed the eight porphyry columns in the situation which they now occupy. The probability is that these columns had been the ornament of some building, a nymphæum, or baths, in the gardens of Lateranus, that Sixtus, wishing to construct a Baptistery in connexion with the Church of St. John, availed himself of these precious materials, and that the Baptistery derived its name from the palace in which Constantine had once resided." It is highly probable, however, that Constantine erected a baptistery adjoining the basilica which he founded in the Lateran palace; and his reluctance to personal baptism goes no length to prove an objection to providing adequate means for the public celebration of the rite. Allowing that much of the present baptistery is due to Sixtus III.,

προαύλιος οἶκος, where the catechumens made their renunciation of Satan and Confession of Faith, and an ἐσώτερος οἶκος, the inner room where the ceremony of baptism was performed. This shows that a well-considered plan for such buildings then existed."—A. Nesbitt, F.S.A., in *Dict. of Christ. Antiq.*

\* "Anastasius in *Vitâ Sixtî III.*"

it is reasonable to suppose that he may have simply added to the original walls built by Constantine. Hübsch, who has carefully examined the building, favours such a supposition, for he states that the walls both of the octagon and the grand vestibule are, to a certain height, unquestionably of a style of construction peculiar to the epoch of Constantine. This is highly satisfactory evidence that the plan is of the earliest type, and may be taken as the starting point in our consideration of the subject of baptisteries generally. The article by Hübsch, in his valuable work on early Christian architecture, is so interesting that we append it as a note.\*

\* "La forme primitive de ce monument ne peut être déterminée avec certitude. Il subit dans le cours des siècles de si nombreuses altérations, que le motif de ne pas négliger le plus ancien des baptistères connus m'a seul porté à l'admettre dans cet ouvrage. Il avait été élevé dans l'origine de divers fragments de monuments païens. Le porche avec les exèdres aux extrémités est démesurément grand et dépasse même les murs du bâtiment principal. Sa disposition est encore antique et ne s'adapte pas aussi naturellement à l'octogone, comme dans d'autres édifices chrétiens de la première période. Mais le type chrétien du monument trahit du reste tellement son origine, qu'on ne trouve parmi les édifices antiques aucun qui lui ressemble. La porte ouvre sur un octogone ceint d'un pourtour développé de même forme. L'octogone central est très-élanqué; son diamètre est de 8<sup>m</sup>, 10. Au centre se trouvait, selon l'usage, le grand bassin baptismal. La partie centrale est portée par huit colonnes très-écartées; au-dessus de leur entablement se dressent huit autres petites colonnes avec entablement, puis s'élève le mur percé de grandes ouvertures, sur lequel Urbain VIII fit élever au XVII<sup>e</sup> siècle une coupole très-hardie, garnie de lucarnes. Les nombreuses fresques qui s'y trouvent datent de cette dernière époque. Sans vouloir préciser absolument l'ordonnance primitive de l'édifice, je n'affirmerai pas que cette partie de la coupole garnie de lucarnes, qui dépasse les murs du pourtour, ait existé dès l'origine. Il ne reste pas assez d'indices pour le faire préjuger. Il me paraît probable que le couloir du pourtour était couvert d'un plafond horizontal appuyé sur le mur de l'octogone central. A en juger par les fortes dimensions des fenêtres du déambulatoire, qui sont presque toutes fermées aujourd'hui, la partie centrale de l'édifice n'avait pas besoin d'être éclairée davantage.

"Quant à la haute ancienneté du bâtiment, l'historien Anastase, dans la vie de saint Sylvestre, Pape, rapporte que ce pontife avait fait construire un baptistère près de son palais—

("Anastas. Bibliothec. in vita S. Sylvestri: 'Fontem sanctum (fecit) ubi baptizatus est Augustus Constantinus ab eodem Episcopo Sylvestro. Ipsum sanctum fontem ex lapide (metallo) porphyretico ex omni parte coopertum, intrinsecus et foris et desuper, et quantum aqua continet ex argento purissimo in pedibus quinque, qui pensavit argenti libras tria millia et octo. In medio fontis columnas porphyreticas, quæ portant phialam auream etc.'")

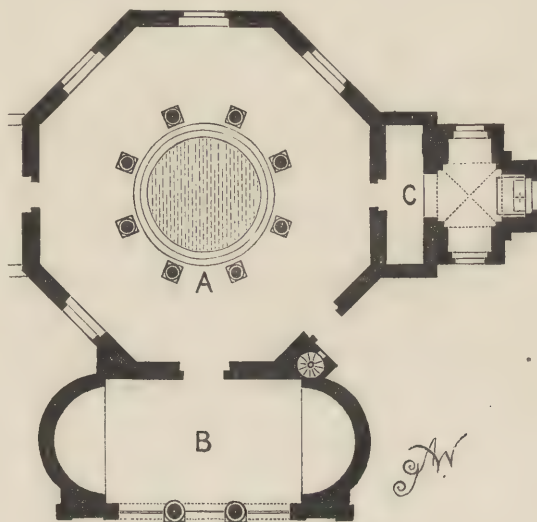
Il en donne une description fort incomplète et s'étend plus sur la beauté du bassin baptismal, richement décoré d'or et d'argent, que sur les formes architectoniques du monument. Dans la vie de Sixte III. (432-440), cet historien dit que ce Pape fit élever les colonnes de porphyre au-dessus du bassin—

("Anast. Bibl. in vita Sixti III.: 'Hic fecit in basilica Constantiniana ornamentum super fontem, quod ante ibi non erat, id est, epistylia marmorea et columnas porphyreticas erexit, quas Constantinus Augustus congregatas dimisit, et jussit ut erigerentur, quas et versibus ornavit.'")—

Il ne faut pas en conclure, comme le fait *Bunsen* dans sa description de Rome, que Sixte III avait fait reconstruire tout l'édifice. Cela ne s'applique qu'à la partie centrale, car les murs d'ancienne et le grand vestibule ont conservé parfaitement le type du siècle de Constantin. Un incendie, un tremblement de terre, l'enlèvement des précieuses colonnes et de leurs architraves, ou un autre accident quelconque pouvait avoir occasionné soit la destruction, soit le délabrement de la partie centrale, et en avoir nécessité la réédification. La couverture, du reste, exigeait dès le commencement des supports intermédiaires, à cause du diamètre très-



The form of the baptistery, as will be seen on reference to the accompanying plan, Fig. 4, is an octagon, with an oblong entrance porch or vestibule attached to one of the sides. The octagonal portion A—the baptistery proper—is about sixty-two feet in diameter; and has in its centre eight antique porphyry columns, carrying an octagonal entablature and a second range of columns of much smaller scale; these are sur-



4

mounted by another entablature carrying walls, which, in all probability, were pierced with windows above. Owing, however, to the many changes which this building has undergone, all is conjecture as to the primitive form of roofing and the termination of the central octagon. The eight main columns have capitals of two different orders; four are Corinthian and four are Ionic, proving beyond question that they were derived from some earlier building or buildings. Within these columns was the piscina, the original form of which is believed to have been circular, and sunk a few steps below the general floor level, as indicated on the plan. The space is at the present time surrounded with a balustrade, and has a large elevated font in the centre.

It is recorded that Pope Anastasius IV., in 1153, raised the walls of the

considérable de l'enciente octogone (il est de 19 mètres), et il paraît difficile d'admettre que ces colonnes avaient été, dans l'origine, établies sur un plan différent de celles d'aujourd'hui.

"Les huit grandes colonnes sont de porphyre; les chapiteaux sont moitié ioniens, moitié corinthiens. Le profil de l'entablement est celui de la dernière époque romaine; toute la face de l'architrave est couverte d'ornements en forme de fûts; la frise est convexe; elles ne sont, avec la corniche, qu'une seule pièce de marbre blanc. La même ordonnance se retrouve dans la colonnade supérieure. Les deux colonnes de porphyre du porche, de style composite provenant de quelque édifice païen, ont à la base les plus riches moulures que je connaisse. Elles sont d'un travail très-distingué et plein d'effet."

building and covered it with a new roof; it is accordingly very probable that the upper tier of columns was added at that time. Both Hübsch\* and D'Agencourt† give sections of the baptistery, attempting to show its state after the additions by Anastasius; they differ very materially from each other. What is more desirable in connexion with this interesting building, is to arrive at some idea as to its original state, or at all events its form immediately after it was rebuilt by Pope Sixtus III. We are



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strongly of opinion that it consisted of a central octagonal lantern surrounded by a one-story aisle, as shown in our ideal restoration, Fig. 5. Such appears to us to be the most obvious form to have suggested itself to the early church builders, and to best accord with the general style of basilican architecture at the time. Nothing could be more appropriate or convenient for a baptistery, a building with a central point of interest and requiring accommodation for a considerable number of interested observers, than a large circular or octagonal hall, lighted in the centre, directly above the point of interest, by an elevated portion in the form of a lantern covered with a roof or dome. For more than one reason the octagon appears to have been generally adopted in preference to the circle. It was the one which presented the least difficulty of construction, especially when the classic entablature was retained: it was also, from

\* *Monuments de l'Architecture Chrétienne*, pl. vii., fig. 6.

† *History of Art*, &c., pl. lxiii., fig. 9.

very early times, held as the emblem of regeneration. The square, from the original idea of the earth's shape, was accepted as the emblem of the world; the octagon was adopted by the Christians as that of perfection consequent upon the confession of the Faith and the new birth in baptism; and the circle as the emblem of eternity or everlasting life.\*

Attached to the octagonal hall of the baptistery of Constantine is a large oblong vestibule (B. Fig. 4), terminating in two semicircular recesses or exedrae, covered with semi-domes. This portion of the edifice is doubtless the species of narthex in which the catechumens made the formal renunciation of Satan and their confession of Faith before they were qualified for baptism. Cyril of Jerusalem calls this vestibule *προαύλιος οἶκος*, and the baptistery proper *ἐσώτερος οἶκος*.†

Pope Hilarius (461-467) built two lateral chapels, entered from the octagon; one dedicated to St. John the Evangelist, and the other to St. John the Baptist. The latter, which still remains in its original state, is indicated at C, Fig. 4. It is richly decorated with mosaics.

The *Lib. Pontif.* contains a detailed account of the magnificent manner in which this baptistery was decorated with porphyry, gold, and silver; and appears to allude chiefly to a large piscina constructed of that valuable stone enriched with silver. Several authorities, however, agree in accepting this account with caution, questioning its historical accuracy.

Rome contains another building, of the time of Constantine, of equal interest to that just described; it is the circular church dedicated to St. Costanza, situated near the church of St. Agnese. As several opinions have been held at different times regarding the origin and destination of this building, we cannot do better than introduce it to our readers' notice, with Gally Knight's summary of the subject. "Some persons have imagined that this building was neither the work of Constantine, nor, originally, a Christian fabric. They admit that it was the burial place of Constantia, the daughter of Constantine, because they are unable in any other way to account for the sarcophagus of porphyry which was found within its walls. But they assert that it was an ancient temple of Bacchus, transferred, either by Constantine or his sons, to a new destination. This opinion is principally founded on the mosaics with which the ceiling of the ailes is adorned, and which represent vine leaves and grapes. But, in the first place, the vine is a Christian emblem, and is so frequently introduced in the decoration of Christian places of worship, that little weight can be attached to this circumstance. In the second place, it was

\* "We know, as a fact, that from the earliest times, Baptisteries and Fonts were octagonal. We know also that the reason assigned, if not by S. Ambrose himself, at least by one of his contemporaries for this form was, that the number eight was symbolical of Regeneration. For as the old Creation was complete in seven days, so the number next ensuing may well be significative of the new."—Neal and Webb's introduction to *Durandus on Symbolism*.

† See footnote on page 264.



not till the time of Theodosius that the heathen temples were invaded. It would not have been safe for Constantine to have disturbed the deities who were still revered by so large a proportion of his subjects. In the third place, the architecture of this building is in conformity with the style of the time of Constantine, and not in conformity with that of a much earlier date. The coupled columns, and the round arches, without an architrave, would not have been found in a temple built in classical times; neither are all the columns of exactly the same size and proportion, an irregularity which only crept in when the arts began to decline.

"But, assuming that the date and the Christianity of this building are sufficiently established, some doubt still remains with respect to its original destination. We find that Anastasius, in his *Life of St. Sylvester*, says that Constantine built a baptistery close to the church of St. Agnes. On the other hand, Ammianus Marcellinus says, that both Constantia, and another daughter of Constantine, (Helena) were buried in exactly this situation; and, finally, the porphyry sarcophagus is found within the walls of this building. From this fact, coupled with the testimony of the historian, it cannot be doubted that this building was, eventually, used as a sepulchral chapel; but as it is so directly stated that Constantine built a baptistery in this situation, and as there are no vestiges of any other building, the probability is that the baptistery and the sepulchral chapel are one and the same. It might be built for one purpose, and afterwards used for another, in the case of persons of such consideration as the daughters of Constantine; and it was in accordance with the custom of those times that they should be buried in the immediate vicinity of such holy ground, as was the cemetery in which the remains of St. Agnes, and other martyrs, had been discovered. . . . The magnificent sarcophagus of porphyry, which was found in this building, is now to be seen in the Galleries of the Vatican. It is ornamented, in high relief, with boys gathering grapes. The ornaments of the sarcophagus, probably, suggested the idea of those of the ceiling of the aisles."

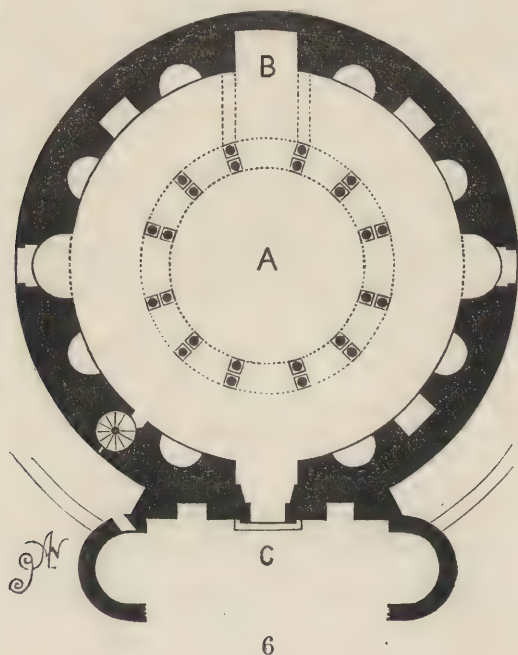
The weight of all the arguments brought to bear on the origin and uses of this building is in favour, firstly, of its being the work of Constantine, who built the adjoining basilica of St. Agnese;\* and, secondly, of its

\* "D'anciens archéologues voyaient dans ce monument un temple païen, dédié à Bacchus, car on trouve dans la voûte circulaire du collatéral des restes de mosaïque qui représentent des pampres. L'ancienne mosaïque de la coupole semblait plus encore révéler dans certains détails une origine païenne. La forme de ce qui reste du vestibule, les vestiges du couloir extérieur ont de même une certaine analogie avec d'antiques monuments romains. Il faut en dire autant du mur d'enceinte qui est fort épais, des niches qui le garnissent à l'intérieur et surtout de la voûte du souterrain.

"Nonobstant ces raisons, on est autorisé à penser, en examinant l'appareil de maçonnerie de briques, et la comparant avec celle de l'époque des premiers empereurs, que cet édifice ne saurait être rangé parmi ceux qui furent élevés avant le règne de Constantin. On trouve dans le mur des briques où se trouve l'empreinte du nom de ce prince, preuve sans réplique de la date de son origine. De plus, les colonnes ne sont pas toutes précisément égales entre elles, et leur provenance de monuments antiques différents ne saurait être révoquée en doute. Quant à l'ordonnance générale du monument, elle déroge totalement de celle des temples

having been originally designed for a baptistery. The *Lib. Pontif.* says that Constantine erected "basilicum Sanctae Martyris Agnetis," also "baptisterium in eodem loco." There is no doubt that very shortly after its erection it was converted into a sepulchral chapel, receiving the remains of the daughters of the emperor. It was first consecrated as a church by Pope Alexander IV in 1254.

In plan and general design the building is perfectly suited for a baptistery. It consists of a circular hall about seventy-three feet in diameter, as shown on the plan, Fig. 6, from which a central space, A, of about



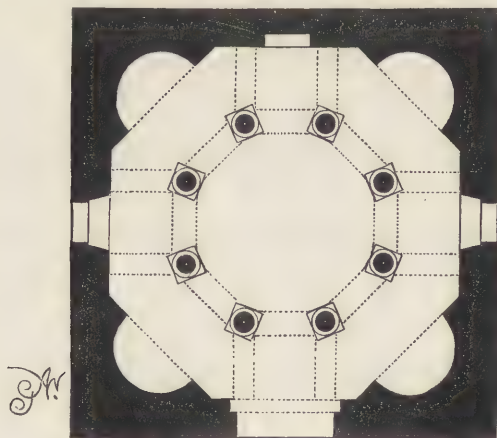
thirty-seven feet in diameter, is divided by twelve pairs of columns placed concentrically. These columns are of granite, monolithic, but not of exactly the same dimensions throughout, which inclines one to believe that they belonged to different buildings, of earlier date. They have Composite capitals of inferior workmanship, surmounted by detached entablatures, with the mouldings carried round their four faces. From these entablatures spring perfectly plain semicircular arches carrying the wall over, which rises as a tambour, pierced with twelve round arched windows, and

païens ainsi que des bâtiments profanes. En citera-t-on un seul dont les murs du dôme s'appuient sur des colonnes tellement grêles et distancées, que la rotonde paraît ne former avec le collatéral qu'une seule enceinte? Dans les constructions romano-païennes, où l'architecte ajoutait à l'enceinte principale des parties latérales, les piliers qui les séparaient et qui portaient les voûtes étaient toujours très-massifs. Toute l'architecture romaine antique n'offre pas un seul édifice où la coupole se dresse sur un tambour aussi élevé—Hübsch. *Mon. l'Arch. Chrét.*

carrying a dome, which reaches the height of about sixty-two feet from the floor. The surrounding portion or aile is vaulted at one level except where interrupted, opposite the main entrance, by an elevated division, B, which was in all probability originally intended for the sacrarium, the deep recess in the wall receiving the altar. It was here the sarcophagus was placed when the building became a sepulchral chapel. The piscina was doubtless in the centre, under the dome; but no record of its nature or any indications of its size or position remain.

One feature yet remains to be noticed, a feature which, in our opinion, goes far to prove the original destination of the whole building. This is the large vestibule or porch, C, with its semicircular recesses, in all essentials similar to that of the baptistery of the Lateran (Fig. 4). Every baptistery of this date would have required such a vestibule, just as the basilica required the narthex, to prevent the hurried and uncereemonial entrance to the more sacred part of the edifice. The vestibule is now in ruins, and its exact original form cannot be clearly arrived at; it was, however, in all likelihood partially open in front and decorated with columns, as in the case of the Lateran example. In addition to what has been mentioned above, there appears to have been an external colonnade round the building from one end of the vestibule to the other; and a large space in front of the vestibule, surrounded by arcades, stated to have measured about five hundred and thirty-five feet long by one hundred and thirty feet broad. A restoration of all is given by Isabelle in his valuable work.\*

We now come to a baptistery which has, without doubt, a pagan origin;

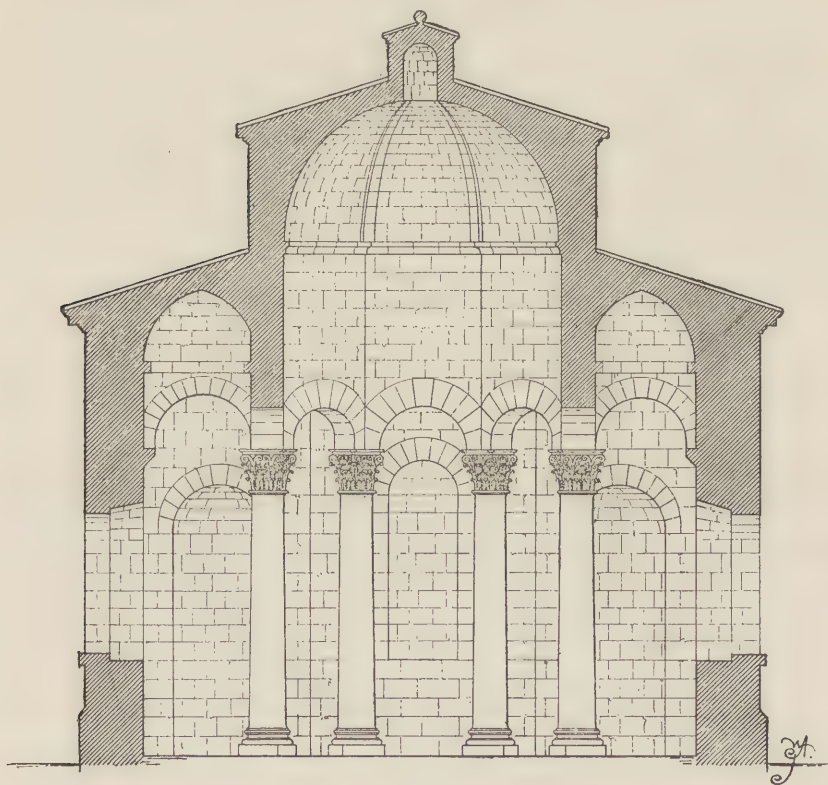


we allude to the baptistery at Riez, a town situated about midway between Digne and Aix. Of this interesting little building, which certainly might

\* *Les édifices circulaires et les dômes.* Paris, 1843.



have been built for a Christian baptistery, Texier remarks :—"On the right bank of the river Colostre stands a small temple, the interior of which is ornamented with eight granite columns of the Corinthian order, arranged on an octagonal plan, and united by semicircular arches. The temple is covered by a dome. The bases and capitals of the columns are of white marble, ornamented with acanthus-leaves; there are masks of deities and fauns in the middle of the volutes; these have given rise to the name which the building bears to this day [The Pantheon]. The structure which surrounds the columns is built of stone, and has been restored of late years, so that we can learn nothing from it. The form of the temple, as well as the character of the orders, was so arbitrary amongst



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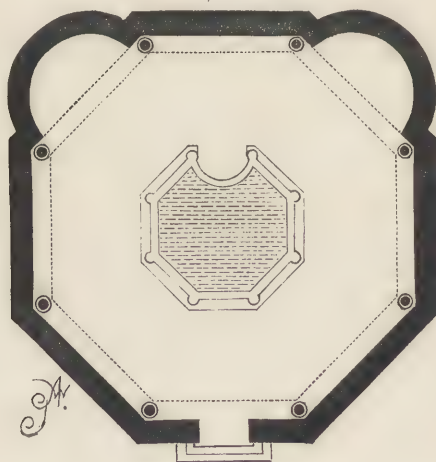
the Romans, that probably this little building was a souvenir of the Pantheon of Rome, and had in the centre an altar dedicated to the twelve gods, like that preserved in the museum of the Louvre. It is certain that, in the sculpture of the capitals, there are no traces of Christian emblems. We can determine approximately the period when this edifice was converted into a baptistery. St. Honoratus established himself in the isle of Lerins at the end of the 4th century, and from that place sent his disciples to preach the word of Christ. St. Maximus came at a later period, and

the establishments which he founded have protected the remains of ancient Riez. A convent was founded in the vicinity of the Pantheon, and the land upon which it was built is still called 'the Field of the Chapter.' We may attribute the baptistery to the time of the latter saint." (Honoratus, Bishop of Arles, A.D. 429).

"Baptisteries were from the earliest period circular or octagonal in plan: hence this little temple was well adapted to its new destination. The diameter of the building between the columns is 16ft. 6in., the height of the columns 16ft. 9in.; the proportion being very much that indicated by various authors for buildings of this description."\*

This interesting building, though not strictly speaking a Christian baptistery, is specially noted and illustrated here, because, as Texier points out, it doubtless formed the model for the baptisteries erected in the surrounding towns, as those at Fréjus (A.D. 810) and Aix (A.D. 1101). Of the latter we shall have a few words to say further on. In Figs. 7 and 8 are given plan and section of the baptistery at Riez, taken from Texier's drawings.

Of the early buildings specially constructed for baptisteries, that which comes next, in point of date, is probably the baptistery of Ravenna, known



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as St. Giovanni in Fonte. It was founded by St. Ursus, Archbishop of Ravenna, between the years 390 and 396; and was repaired and decorated with mosaics by Archbishop Neone (425-430), and by him dedicated to St. John the Baptist.

Like the generality of baptisteries, it is an octagon in plan (Fig. 9). Two small apses now exist, projected from the sides flanking that directly opposite the entrance; in one of which the present altar is placed.

\* C. Texier and R. P. Pullan. *Byzantine Architecture*. Lond. 1864.

Recent investigations appear to prove that originally there were four apses. Hübsch was informed of this fact, but owing to existing obstructions was unable to satisfy himself on the subject during his residence in Ravenna. The floor level has been considerably raised since the erection of the building; this not only reduces the height, but covers the bases and lower portions of the angle columns, and injures the effect of the interior accordingly.

The baptistery, like all the ancient ecclesiastical structures of Ravenna, is of brick; and externally its design is bold, but of the greatest simplicity. The only attempt at relief is made by shallow arched panelling in the upper part, immediately above which is the simple brick cornice. Internally, the building was treated in a highly artistic manner (we shall now speak of the interior in the condition it was left by Archbishop Neone). It was divided into two stages, differing in height and treatment, above which rose a circular dome. The total internal height being about fifty feet. The lower stage, divided from the upper by a horizontal moulding, was about twenty-four feet high. In its angles were eight marble columns with sculptured capitals; from these rose eight arches, four attached to the walls and four over the semi-domes of the small apses. The whole of the wall surfaces were covered with slabs of different coloured marbles; with certain portions, such as the spandrils and tympani of the arches, ornamented with opus Alexandrinum, in which Greco bianco e nero antico, verde antico, giallo antico, and porphyry appeared.

The upper stage had also angle columns with two intermediate columns on each face; arches connected the capitals of all, forming a continuous arcade round the octagon. The central arch on each face was larger than the two side ones, and was pierced as a window. By these eight windows the baptistery was amply lighted. Above the capitals of the angle columns were corbels, on which the construction of the dome commenced; arches were carried from corbel to corbel, spanning over the three arches of the arcade on each face, and also acting as supports to the dome.\*

The dome was covered with rich mosaic of the following design: the eight pendentives contained devices with large leaves; and above them was a band or zone, in which eight altars supporting open books were represented, divided by light architectural designs. Over this was a deeper zone containing figures of the twelve apostles carrying crowns in

\* "Le monument est de forme octogone et abrité par une coupole ronde. Il possède les qualités principales de l'architecture chrétienne, qualités que nous avons itérativement fait ressortir. Son profil général est svelte, sa structure hardie. Sur un mur de 13 mètres d'élévation et de 0<sup>m</sup>, 67 d'épaisseur seulement, s'élève une voûte qui n'a pas moins de 11<sup>m</sup>, 30 de diamètre. On chercherait en vain dans l'antiquité païenne une pareille coupole. Sa construction n'a pu s'effectuer qu'à l'aide d'une disposition très-originale. En examinant la coupe on voit que la voûte de la coupole repose sur huit arcs engagés, mais saillant fortement, qui reposent eux-mêmes sur huit corbeaux formant une saillie de 0<sup>m</sup>, 60 sur le mur. Cette disposition donne au mur principal une force de résistance équivalant à un mur de 1<sup>m</sup>, 30 d'épaisseur, tandis qu'il n'en a que la moitié. C'était un moyen d'économiser les matériaux et de gagner de l'espace."—Hübsch. *Mon. l'Arch. Chrét.*

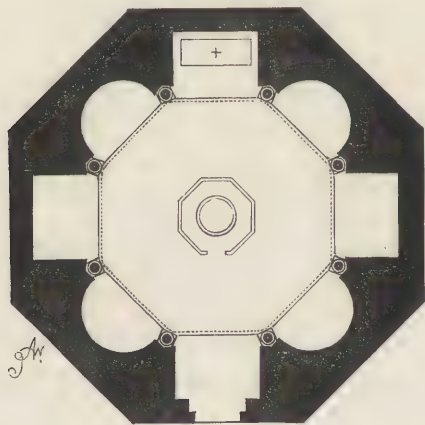


their hands. The central medallion of the dome contained a representation of the baptism of our Lord. The spaces between the upper wall arcade and the arches of the dome were filled with mosaics of foliage and symbolical animals.

Fortunately, enough has been preserved to the present day to enable us to form a tolerably correct idea as to the appearance of the interior when in its original and perfect state. A few original columns with their capitals, portions of the marble wall lining and opus Alexandrinum, and the entire mosaic decoration of the dome, are still in existence.

The large octagonal piscina in the centre of the present elevated floor is unquestionably an old one, if not that of Neone's time. It has a very peculiar feature in the shape of a semicircular recess in one side (see Fig. 9), a sort of ambon, in which the priest stood whilst baptizing the convert in the water. The entire piscina is not used at the present time, a font or water vessel being placed inside it.

In the baptistery of the cathedral of Novara we find a treatment similar to that of the Ravenna example, in so much that it is an octagonal apartment, covered with a dome, two stories in height, the lower one having columns in the angles with recesses between, and the upper one pierced with windows. The Novara baptistery, as will be seen on reference to the



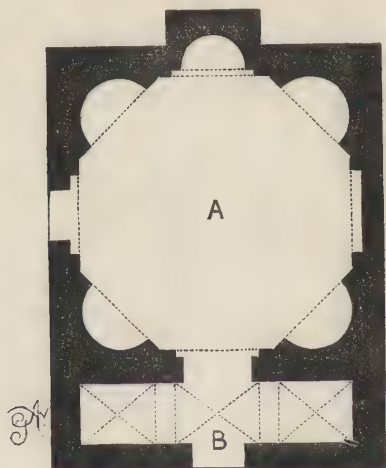
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accompanying plan, Fig. 10, has niches and square recesses alternately in the sides of the octagon, whilst in the last example four niches or apses only were introduced. The treatment internally is of the greatest simplicity: the octagon is carried upwards perfectly plain and closed with an octagonal dome, without any cornice or other line of separation. Eight small round-arched windows are pierced in the wall between the arches and the dome to light the interior. The baptistery is connected with the cathedral by a spacious atrium (see plan Fig. 11, in article *Atrium*), an arrangement which frequently obtained in early basilicæ.

The date of the erection of the baptistery is uncertain, but it is evidently much older than the cathedral and atrium which were built against it during the eleventh century. Hübsch states that the baptistery was erected either in the fifth or sixth century. Its style certainly bears out his supposition.

It is worthy of remark that the plan of this baptistery is almost identical with that of the temple of Jupiter, erected, in the third century, within the enclosure of the palace of Diocletian, at Spalatro.\*

Of the early baptistery in its simplest form, namely, a plain octagonal apartment, covered with a dome, and having four or more semicircular recesses in its sides, that of the church of St. Sophia, at Constantinople, is probably the most interesting example. It doubtless represents the usual type of Byzantine baptisteries, of which so few examples remain at the present day. In ground plan it is quadrangular externally and octangular



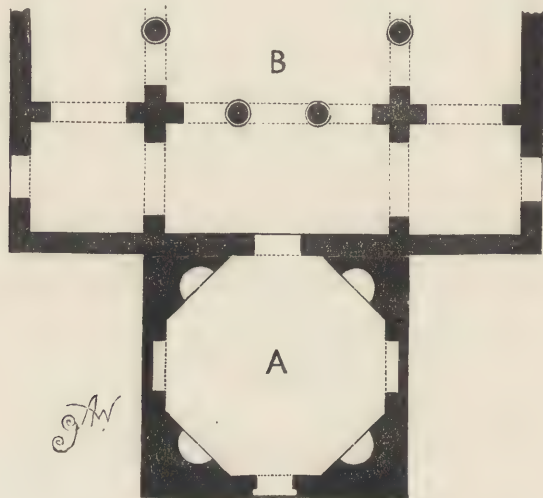
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internally (Fig. 11), with a western vestibule from which the baptistery is entered. Opposite the entrance is a small apse, sunk in a projected portion of the eastern wall; in this the altar was originally placed. Four other semicircular recesses are sunk in the angle masses of wall in the same fashion as the scholae of the Pompeian frigidarium (Fig. 1). The interior is comparatively speaking low, being only about the greater diameter of the octagon in total height. The lesser diameter of the interior is about forty-three feet. The upper story is octagonal externally, and is pierced with round-headed lights. The baptistery is situated at the

\* D'Agincourt gives the plan and section of this edifice in his plate of baptisteries (Arch. pl. LXIII), "to show the analogy it presents to the principal baptisteries which were erected since that period."

south-west corner of the church and is entered from it through the north door shown on the plan, Fig. 11.

A baptistery, very similar in plan, and probably not very many years later in date, is attached to the atrium of the cathedral of Parenzo, in Istria.\* It is square externally in its lower portion, and octagonal above, where it is pierced with eight large windows. Internally it is an octagon from



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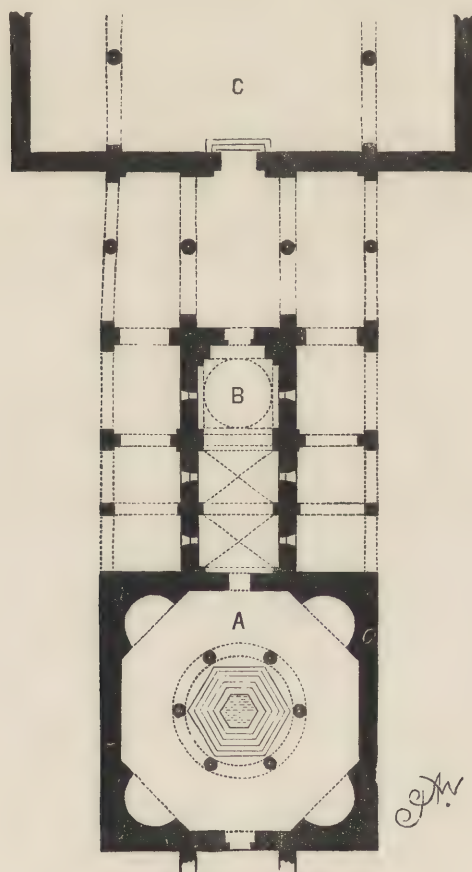
floor to roof (see plan, Fig. 12), with perfectly plain walls, save where they are broken by the niches and recesses and pierced by the windows. At the present day the walls are somewhat less than their original height, and the original roof no longer exists; there can be little doubt, however,

\* "Quelle est l'époque de la construction de l'église d'aujourd'hui et celle de l'exhaussement de son pavé? C'est là une question qui n'est pas résolue encore. On trouve, il est vrai, sur la fondation de l'évêché de Parenzo, sur son histoire et sur l'église beaucoup de documents; on voit même des inscriptions incrustées dans les murs de cette dernière. Mais tous ces documents paraissent se contredire. Les deux descriptions sus-mentionnées entrent dans de longues dissertations à ce sujet. Quant à nous, nous ferons remarquer: 1° qu'il existe un document de l'évêque Euphrasius, contenant diverses dispositions qui concernent l'évêché de Parenzo; 2° que l'inscription très-ancienne, qui se voit entre les mosaïques de l'abside, désigne un évêque du nom d'Euphrasius comme ayant reconstruit l'église; 3° que le monogramme d'un évêque Euphrasius se voit sur un certain nombre de coussinets surmontant les chapiteaux des colonnes de l'intérieur; et 4° que dans une ancienne chapelle de Saint-André, adossée à l'angle nord-est de l'église, le tabernacle en marbre porte une inscription qui désigne aussi un évêque nommé Euphrasius comme fondateur du monument. D'après l'argumentation, très-plausible selon nous, de Lohde, l'Euphrasius cité par le document n° 1 serait le même que celui que l'inscription de l'abside nomme le restaurateur de l'église qui tombait en ruines. Lohde place son épiscopat vers la fin du vi<sup>e</sup> siècle, et Coleti vers la fin du viii<sup>e</sup>. La fondateur de l'église première, au contraire, serait cet Euphrasius nommé dans l'inscription du tabernacle, et qui, selon Ughelli, fut le premier titulaire de l'évêché de Parenzo, fondé au commencement du vi<sup>e</sup> siècle."—Hübsch. *Mon. l'Arch. Chret.*



that it was of timber, like that of the cathedral, no evidences of any kind existing of a domical covering. The plan, Fig. 12, shows the mode in which the baptistery is connected with the atrium. On the western side there appears to have been a tower, the lower story of which may have served as the usual vestibule of the baptistery, or perhaps as a chapel, in which case the western part of the atrium was doubtless used as a vestibule, just as the eastern portion forms the narthex of the cathedral.\*

Attached to the cathedral of Aquileia is an ancient baptistery which, though in ruins, is of great interest. We give a plan of it and the buildings which connect it with the cathedral in the accompanying



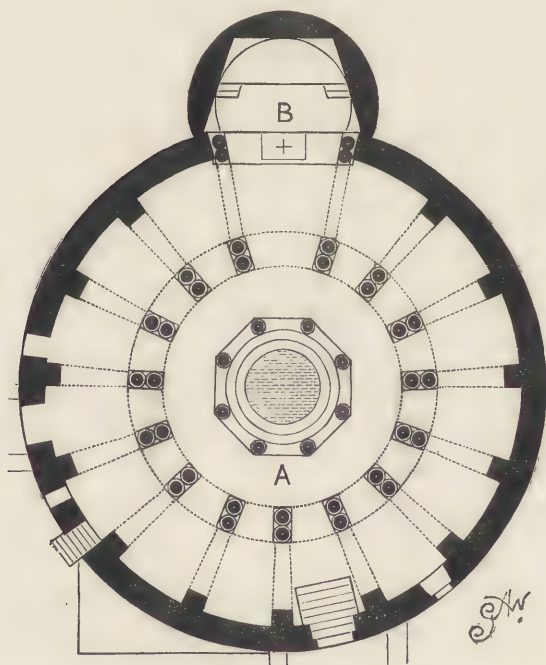
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illustration, Fig. 13. It will be observed that the baptistery is very similar in ground plan to those of Riez, St. Sophia, and Parenzo, being an octagon internally (A), with four semicircular recesses. In the centre is a hexagonal piscina, surrounded by six columns, which are believed to

\* For an entire plan of the cathedral, see article *Basilica*.

have originally supported a gallery. The piscina is formed by a low wall, rising on the outside from a single step; it is sunk in the inside below the general floor level, the bottom being reached by three steps, including the low wall as one. For what reason the piscina was made hexagonal, and six columns were placed inside an octagonal building, it is difficult to determine. Probably the columns were antique, and only six of suitable dimensions could be procured at the time the building was erected; or possibly the builders found, after the walls were partly built, that the adoption of eight columns would crowd the interior too much, and render access to the piscina less convenient. No reason, on symbolical grounds, so far as we are aware, can be adduced for the unusual form of the piscina.

The baptistery proper is approached through a vaulted building of two stories (B, Fig. 13), designated by the name of "Chiesa dei Pagani." The ground floor was probably the usual porch or vestibule in which the catechumens were instructed and made their Confession of Faith; whilst the portions on each side, and between its entrance and the west door of the

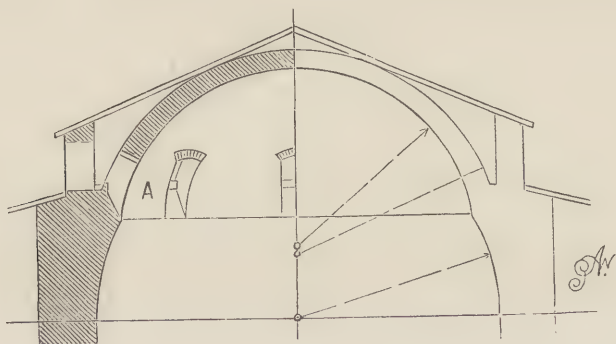


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basilica, C, doubtless served as a sort of atrium and narthex. The entire arrangement is unique, and extremely interesting to the student of early ecclesiastical architecture. The upper story of the "Chiesa dei Pagani" is believed by some authorities to have been set apart for women; access to it having been gained by a stair in the tower, which originally rose at the western face of the baptistery, the gallery of the baptistery con-

necting the two portions.\* The diameter of the octagonal apartment internally is about forty-five feet. The date of this baptistery has not been fixed with any degree of authority, but it may safely be said to be not later than the fifth century.

We now come to one of the most important early baptisteries—the large circular church known as St. Maria Maggiore, at Nocera, between Naples and Salerno. It consists of a circular apartment about seventy-eight feet in diameter, with a dome of about thirty-nine feet in diameter, supported upon thirty columns, coupled, and placed radiating, as shown in our plan, Fig. 14. Fourteen perfectly plain semicircular arches spring from the coupled capitals, whilst one elliptical arch spans the greater space left between the columns directly in front of the sacrum or presbyterium, B. The aisle surrounding the dome is vaulted throughout, and divided into compartments by massive arches, which spring from buttresses projected inwards from the outer wall, and terminate between the arches of the dome. These radiating arches have their springers on the buttresses considerably lower than those at the arcade under the



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dome, being properly constructed to convey the lateral thrust in the most efficient manner to the buttresses and surrounding wall. The dome is not in this case of the usual semicircular section, but presents a remarkable form, produced by the intersection of two semicircles of different radii, as indicated in the accompanying diagram, Fig. 15.† The mode in which the dome is lighted by windows is shown at A.

\* In the following passage (*De Civitat. Dei*, l. 22. c. 8—t. 7. p. 265 f.):—"In parte fœminarum observanti ad baptisterium," &c., St. Austin seems to intimate that there were distinct apartments for men and women in the early baptisteries. St. Ambrose speaks of "the baptisteries of the church," as if there were more than one. See Bingham's *Antiquities of the Christian Church*, Book viii.

† "La coupole, qui a 11<sup>m</sup>, 80 de diamètre, se présente avec une structure et des formes toutes particulières; elle prend naissance immédiatement au-dessus des archivoltes de la construction centrale, et sa section droite n'est pas un demi-cercle, mais bien une courbe fortement surhaussée et brisée au tiers de sa hauteur. Cette courbe, dont la partie



The great piscina (A, Fig. 14), placed in the central space under the dome, is circular internally and octagonal on the outer face of its low surrounding wall. From the top of this wall to the bottom of the basin there is a depth of nearly five feet, descent being made by three deep steps, including the wall as one. The whole of the interior of the piscina was covered with marble. At the angles of the wall rose eight columns, which most probably supported an ornamental covering of some kind, forming a species of baldachin. Only three of these columns remain, and not a fragment of the covering exists. The presbyterium, B, is arranged after the fashion of the apse of the early basilica, the altar being advanced, with the seats for the presbyters behind and elevated.

Fortunately, the interior of this most interesting building has not been restored, in the modern acceptation of the word. Owing to water percolating into the interior from the soil outside, which was considerably higher than the floor, the baptistery was abandoned before any radical changes had taken place. The whole structure is now neglected.

With reference to the date of its erection there appears to be no definite information. It is evidently, however, a Christian building displaying a decided departure from the traditions of the architecture of pagan Rome. The classic entablature, for instance, has entirely disappeared, and the arches spring directly from the abaci of the capitals; the arches have no archivolts; and, generally, all feeling of horizontality is done away with in the design. It was built most probably about the beginning of the sixth century.

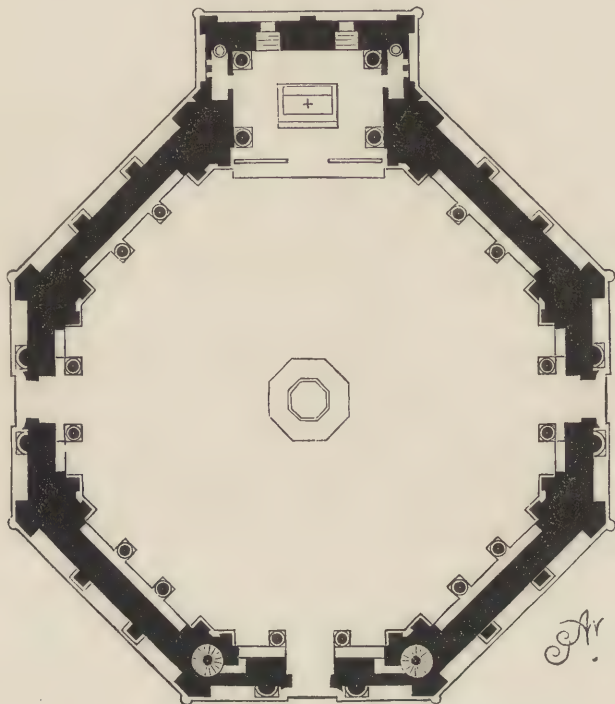
The most important and magnificent baptistery in existence—that of Florence—is generally allowed to have been erected about the same date as the preceding building, at Nocera.\* Originally it was the cathedral of Florence, and stood without the walls of the city. It became the baptistery on the erection of the present cathedral, which was commenced in 1298. Though not intended for a baptistery, it formed, when the alteration was made, the most perfect baptistery in the world, and it still remains unsurpassed.†

inférieure se rapproche assez brusquement de l'axe, offre un grand avantage sous le rapport statique. Lorsque la partie inférieure d'une voûte qui n'exerce pas encore de poussée latérale est disposée de manière à ne laisser à la partie supérieure qu'une petite portée, cette partie supérieure n'exercera qu'une poussée restreinte, en proportion de sa portée réduite. On a exprimé un doute sur la question de savoir si la partie supérieure de la coupole est contemporaine de la partie inférieure. Ce doute disparaît quand on considère que la même maçonnerie de moellons de tuf se continue encore à plus de quatre mètres au-dessus de la brisure de la courbe, aussi haut qu'il nous a été possible de l'examiner. Les assises sont posées horizontalement à la naissance de la coupole et jusqu'aux fenêtres, au-dessus desquelles elles sont posées en voussoir."—Hübsch. *Mon. l'Arch. Chrét.*

\* Lami (*Lezioni Toscane*) fixes the date about the middle of the seventh century, in the reign of Grimoaldus, who died in 671.

† For our present purpose it is unnecessary to go into the several conflicting opinions relative to the origin of this building, or to enlarge upon the idea, firmly held by the early Florentines, that the first structure, now entirely covered with marble and other embellish-

On reference to the ground plan (Fig. 16), which is that of the building as it at present exists, it will be observed that it is octagonal both ex-



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ternally and internally, with a projecting sacristy on its western side, and entrances in the remaining cardinal faces.\* The old piscina was originally placed in the centre, as indicated on our plan, but nothing at the present time occupies that position.† The font now used (erected 1658) is hexagonal, and placed adjoining the south-west face, elevated on steps and railed round. In the sacristy, which was added in the early part of

ments, was the temple of their tutelar deity, Mars. Not having been originally constructed for a baptistery, its early history is hardly of importance in connexion with our present subject; but we may here quote Gally Knight's short remarks on the matter:—"The building, which is now the Baptistery of Florence, has been the subject of much discussion, having by some been considered to be the original temple of Mars; but Lami, in his *Lezioni Toscane*, has set this matter at rest by showing that, though the Baptistery is almost entirely composed of antique pillars and marbles, yet, as these materials are irregularly put together, and as the capitals of the pillars are not the same, this building cannot be Roman work, and must have been constructed in subsequent times."

\* For plans of the building in its supposed original state, see *Mon. l'Arch. Chrét.*, pl. xix.

† The great font or piscina is stated to have been destroyed by Francesco de Medici, on the occasion of the baptism of his son Philip, in 1577; an act which gave great and just offence to the Florentines.

the thirteenth century, is placed the high altar. It is very probable that an apse was removed to make way for this sacrarium, although one would naturally look for such a feature on the eastern side. Some believe that the only public entrance to the building, whilst it was the cathedral, was where the sacrarium now stands. The columns on the sides of the octagon, internally, are antique monoliths of Sardinian granite; they support an entablature at the height of about twenty-three feet from the floor. Above the entablature rises the second stage, evidently materially altered from its original design; once, probably, a simple arcade, resting on angular piers, and covered with slabs of marble and opus Alexandrinum, as in other early works, it is now ornamented with pilasters, between which are coupled arches on small columns, with Ionic capitals. Above the second entablature is a dwarf stage, divided into square compartments having panels and openings alternating. Immediately from this springs the magnificent octagonal dome, covered with its wealth of deep-toned mosaic decoration. Originally, this dome was lighted by an opening in its centre, like the Pantheon, at Rome, a building which is commonly supposed to have suggested the design. There are several points of resemblance; but the dome of the baptistery differs in all respects from that of the Roman building. The Pantheon has a dome of a semicircular section and circular in plan, whilst the dome of the baptistery is octagonal in plan and a pointed arch in section. The proportions of the interiors are different; the Pantheon is nearly equal in height and diameter, whilst the height of the baptistery is rather more than one and a quarter its lesser diameter. The lantern which now surmounts the dome was constructed in 1550. The dome is entirely covered with mosaics, which, though executed at different times and by various artists, do not present extreme differences in treatment. The most important subject is that of our Lord in Glory, seated on a bow within a circular aureole; this is directly over the sacrarium. The mosaics are by a Greek artist, named Apollonius, and his pupil Andrea Tafi, Taddeo and Agnolo Gaddi, Fra Jacopo da Torrita, Alessandro Baldovinetti and his pupil Domenico Ghirlandajo, Lippo Lippi, and some other Florentine artists of less note. The iconography of the entire dome is far too complex and elaborate to admit of description here.

The floor is laid with black and white marble, in complicated and beautiful patterns, producing a peculiarly rich effect; the central space, where the original piscina stood, being plainly paved. The ornamental pavement dates about 1200.

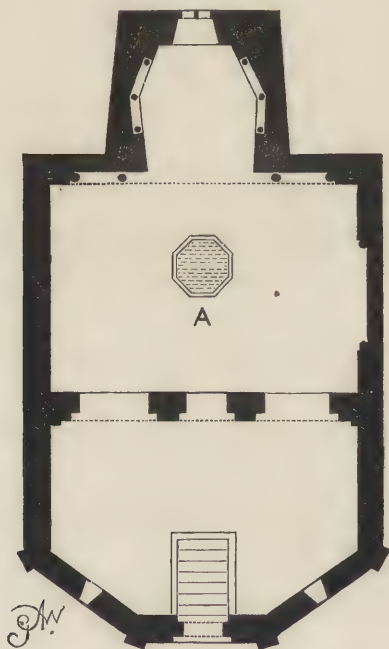
Externally the baptistery presents a very different appearance now to what it did in its original simplicity. It was entirely cased with black and white marble by Arnolfo del Cambio between 1288 and 1293. It is divided by entablatures into three stages, and enriched with pilasters, arches, and panelling.

The three entrances to the building have superb bronze doors, now well known to every student of art. The south door is the work of Andrea



da Pisa, finished in 1330; and the north and east doors were designed and executed by Ghiberti, who completed one in 1424, and the other in the year 1442.

There exists at Poitiers an ancient building, of the greatest interest to the student of early Christian architecture. This building, commonly called the "temple de Saint-Jean," and now used as a sort of museum, was originally the baptistery of Poitiers. It is fully illustrated and described by Gailhabaud in his *Monuments Anciens et Modernes*, from which work we have produced our plan, Fig. 17.



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The date of the foundation of this baptistery has been the subject of much discussion, but its great age is questioned by none. It was probably built about the end of the fifth or the commencement of the sixth century; and has undergone some additions and alterations since. The peculiar form of the building will be seen on reference to the plan; the portion A, with a deep piscina sunk in its floor, and including the chapel or sacarium projected from its north-east side, is the original structure. The apsidal part, which served as a vestibule, is of later date.\* From certain evidences it appears that small apses originally projected from the side walls of the

\* "Le baptistère de Poitiers se compose d'un corps de bâtiment principal, dont la forme est celle d'un rectangle allongé, ayant, hors œuvre, en moyenne 13<sup>m</sup>, 90 de largeur, sur 10<sup>m</sup>, 55 de longueur. Sur la face Nord-Est de ce rectangle est appliquée une sorte d'apside de 5<sup>m</sup>, 45 de saillie, qui, extérieurement, a la forme d'un trapèze dont le sommet est de 6<sup>m</sup>, 50. Au

building. One of these is said to have existed up to the commencement of the present century; its position is indicated on the plan by the thinner portion of wall on the south-east. The entrance was in the south-west wall; and probably there was in connexion with it some kind of porch or vestibule, as common in early baptisteries, which was removed when the present apsidal addition was made.

In that remarkable group of seven churches in Bologna, known under the general name of St. Stefano, there is one (St. Sepolcro) which is generally believed to have been the ancient baptistery of the city. There are no records in existence which throw any light on the date of its erection; but from its early character, and the fact that an ancient piscina or large basin of marble is still preserved, bearing an inscription in which the name of Luitprandus appears, it is supposed to have been erected by that Lombard king, or during his reign, in the eighth century.

The outer wall of the building is irregular in plan; but the central portion is a dodecagon, formed of columns with low square capitals, of the cushion type, but entirely angular in treatment, carrying round arches. Above these the wall is built plain, with small vaulting shafts in the angles, up to an ornamental cornice, at which level the dome springs, semi-circular in section and with twelve sides to correspond with the wall below. The dodecagon was most probably adopted as being more easily treated than the circle. The circular plan entailed difficult masonry in connexion with the arches, which was entirely done away with in any straight sided figure. The building is now used as a church, and retains no traces of its original arrangement as a baptistery; the marble basin alluded to being placed in the court of a neighbouring church, to which it was in all probability removed when detached baptisteries ceased to be considered imperative.

Entering the ninth century, we have to notice the baptistery of Cremona, a large octagonal building standing south-west of the Duomo. It is constructed entirely of brick, and is extremely simple in all its features; the interior being finished without any decoration to relieve the sombre and uniform tint of the material. It is covered with a plain octagonal red brick dome, from the centre of which rises a small lantern. The interior is lighted by small windows placed high in the walls. The wall surfaces, inside, are arcaded in the manner of the early Lombard architects. In the

contraire, à l'intérieur, elle présente cinq pans qui en font une portion d'hexagone irrégulier. Sur les faces Sud-Est et Nord-Ouest du grand corps étaient également appliquées des absides, mais celles-ci étaient semi-circulaires et couvertes d'une voûte en cul de four extradossée. L'une de ces absides existait encore au commencement du siècle, car elle est figurée sur une des planches de l'ouvrage de Siauve, qui a été publié en 1805. Sur la face Sud-Ouest du rectangle une adjonction, datant vraisemblablement du xi<sup>e</sup> siècle, est venue modifier considérablement le plan primitif de l'édifice. Cette adjonction se compose d'une sorte de porche formé par les cinq pans d'un octogone irrégulier, dont deux sont en prolongation des murs de face du grand corps. Cette construction, ayant 9 mètres de saillie, fait que le monument a aujourd'hui en longueur totale, hors œuvre, 25 mètres."—Gailhabaud. *Monuments Anciens et Modernes*. Vol. ii. Paris, 1870.

centre of the floor is a large font, cut from a single block of marble. The baptistery is entered through a projecting porch, the shafts of which rest on the backs of lions. This feature is unusual in connexion with baptisteries. The exterior is otherwise very simply treated, the walls being relieved only by an arcaded stage near the roof, in which the lights are pierced. The roof is of the ordinary pyramidal form.

At Asti there is a circular building of the eleventh century which evidently was the baptistery of the place. The central portion is octagonal, supported on low columns and round arches, and covered with a circular dome. The aisle is wide, low, and vaulted. The building is lighted by small windows in the surrounding wall only. The interior is accordingly, even in the brightest hours of the day, in a state of gloom, which deepens almost to darkness towards the dome.\*

There are four baptisteries founded in the twelfth century which specially claim our attention, namely, those of Aix, Verona, Pisa, and Parma; the last-named being one of the finest in existence. We shall speak of the four in the order of their erection.

The baptistery attached to the cathedral of Aix is stated to have been constructed in the year 1101. This date accords with much of its work, but the columns of polished granite, with their late Roman Corinthian capitals, are evidently of the last period of the empire. One column differs from the rest in not having its shaft in one stone, and having a base of different form. These columns have beyond all question belonged to a temple, or some other pagan building or buildings. The baptistery may be described as octagonal, although two sides of the aisle wall are carried parallel, to join the cathedral wall at right angles, and to allow of two large entrances being formed from the cathedral. At the angles of the central octagonal space are placed the eight antique columns carrying round arches, and an octagonal dome of elliptical section. Circular windows are pierced between the arches and the start of the dome. The aisle is vaulted. The font, which is of later date than the building itself, is placed under the dome. About forty years ago the interior was altered in appearance by the addition of modern details, which have quite destroyed its twelfth century simplicity. The diameter of the interior is about forty-five feet, and the height of the dome about fifty feet.†

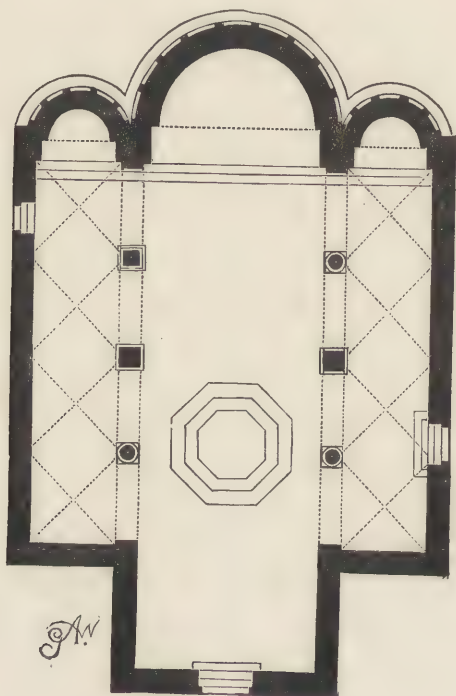
The ancient baptistery of Verona was destroyed by an earthquake in the year 1116, and about ten years later the present building is supposed to have been erected. It differs so essentially in plan from all the earlier Italian baptisteries, that one may reasonably question if it was originally intended for one. The combination of a church for ordinary services with a baptistery may have been the intention of its founders. Reference to

\* Drawings of this baptistery are given in Osten's *Bauwerke in der Lombardei*; and a small plan and section in Fergusson's *Handbook of Architecture*.

† A plan and section of this baptistery in its original state are given in *Monuments de l'Architecture Chrétienne*, pl. xlvii.; and an interior perspective in Texier's *Byzantine Architecture*, pl. xi., showing the modern additions.



the plan, Fig. 18, will explain our meaning. The building is of the basilica type, consisting of a nave and lateral ailes, and terminating in three apses, covered by semi-domes. The ailes are vaulted, but the nave has a timber roof only. The pillars which support the arches are of different forms, and some of them probably belonged to the earlier baptistery. The architecture throughout is of the greatest simplicity. Near the centre of the nave is placed the piscina, octagonal in form, and measuring about ten feet in diameter. This is an elaborate work, hewn



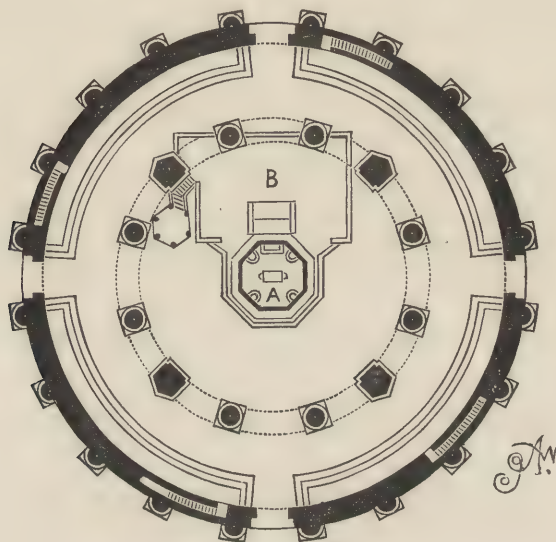
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from a single block of Verona marble; on the eight sides are sculptured, in a style somewhat rude, but perfectly agreeing with its date, the Annunciation, the Visitation, the Nativity, the Adoration, Herod commanding the Massacre of the Innocents, the Massacre, the Flight into Egypt, and the Baptism of our Lord.\* The piscina is elevated on two steps, as indicated on our plan.

In the year 1153, the architect Diotisalvi commenced the erection of the baptistery of Pisa; but it was not completed in all respects until the beginning of the fourteenth century, as many of its details clearly prove. Its plan, however, is by Diotisalvi, and so far it may be classed amongst the baptisteries of the twelfth century.

\* A small drawing of this piscina is given by D'Agincourt, Arch. pl. lxiii., Fig. 23.

It is a circular building both externally and internally, as shown in the accompanying ground plan, Fig. 19, measuring internally ninety-nine feet in diameter. Four entrances, at the cardinal points, give direct access to the aisle surrounding the central portion. The latter is divided from the aisle by four angular pillars or piers, and eight circular columns of Sardinian granite, carrying capitals of a Corinthian character; these are not placed at uniform distances apart, as may be seen on reference to our plan, but in such a way as to secure wider intercolumniations opposite the entrances. Stilted round arches rise from the capitals to a uniform



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height. A short distance above the arches is carried a horizontal cornice, from which rise twelve piers carrying round arches somewhat less in span than those below. A few feet higher is another cornice; and immediately from it the peculiarly shaped internal covering springs. This covering is of brick, in the form of a truncated cone, to the height of about fifty-nine feet above the cornice, where it is closed with a parabolic dome. It has no apertures for light in any part, and is perfectly plain throughout. Only a small portion of this covering appears externally, there being another circular domical covering of brick, which springs from the outer wall, and terminates against the cone, a little below the start of the parabolic dome. The aisle is vaulted at the level of the lower arcade; and over it is a gallery, vaulted above the level of the upper cornice, so as to form an abutment to the thrust of the cone. The total height of the interior is about one hundred and sixty-two feet. The building is lighted by eight windows in the aisle wall, and two tiers of small windows in the gallery. The internal arrangements are interesting; and in describing them we

prefer giving Mr. Webb's words on the subject. He examined the baptistery chiefly with reference to its appointments. He says:—"The ritual arrangements are very perfect. All round the walls is a raised platform of three steps. In the very centre is the font, a kind of octagonal bath, formed by a low wall, two feet seven inches high, and raised on three steps. This is for adult immersion. Attached to each diagonal face of the octagon, internally, is a round basin, for the baptism of infants: these are seventeen inches in diameter. The top step surrounding the font is extended westward, so as to form a small platform, which is bounded to the west by the back of the altar. The two lower steps are still further extended westward, as far as the columns dividing the centre from the aisle; and this platform forms the choir, which is bounded by dwarf walls, and has double stalls returned at the west end, and an altar facing east, so that the celebrant looks over it towards the font and the body of the baptistery. Just outside this choir on the north side is a modern and worthless ambon; but on the south side there is a beautiful ambon, the work of Niccolo Pisano, in the thirteenth century. This is approached by steps from the west part, and is itself hexagonal, with the gospel-desk, supported on an eagle, facing north-east. At a bend in the steps, facing north, is another and lower desk, supported by two figures of angels, and a shaft standing on a lion."\* The pedestal shown on the plan, in the centre of the font, supports a statue of St. John, by Baccio Bandinelli.

Externally the baptistery is highly ornate in treatment, displaying, in its several parts, different periods of construction, beginning with that of Diotisalvi, and terminating in the fourteenth century. The lower stage has a bold attached arcade of stilted round arches, rising from twenty columns, with capitals of Corinthian character, similar to those in the interior. Under sixteen of the arches are pierced the aisle windows, plain round-headed lights. The four doorways occupy the remaining arches which face the cardinal points; they are richly sculptured on their lintels and tympani. The second stage, divided from the lower by a sculptured cornice, consists of an arcade of numerous small stilted round arches, supported on slender detached shafts, with capitals similar in style to those below. Over every second shaft rises a tabernacle of a pointed character; these are connected together with elaborately sculptured gablets, which, though rather out of keeping with the more severe work below, produce a very rich effect round the building. The upper stage presents more wall space; and as regards the mode in which it is divided round its circumference, by angular buttresses and tabernacles, it accords with the number of arches in the lower stage, but rises rather awkwardly from the second or intermediate stage, which is entirely out of rhythm with both it and the lower, so far at least as its tabernacles and gablets are concerned. The upper stage is pierced with twenty double-light Gothic windows, with round arches, and surmounted with crocketed gablets. The wall is

\* *Sketches of Continental Ecclesiology*, p. 357.

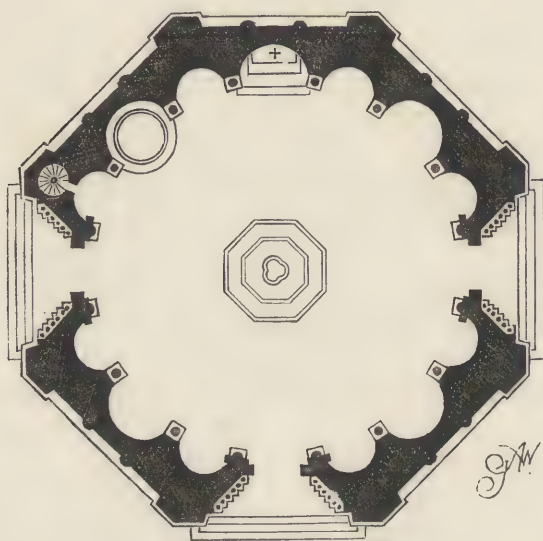


carried behind and nearly up to the finials of these, and from it springs the semicircular portion of the roof, before described. The whole design is terminated with a figure of St. John. The building stands on a circular platform three steps in height (not shown on our plan). The chief material used in the facing of the walls and the architectural features, and the flooring of the interior, is white marble, relieved with bands, &c., of marble of a dark bluish tint.

In the opinion of Gally Knight the baptistery of Parma "is the most splendid of the baptisteries of Italy." It is unquestionably a very noble building, but we cannot bring ourselves to rank it higher, either on the score of interest or magnificence, than the baptistery of Florence. It is true, however, that the latter building, as already mentioned, was originally built as a cathedral, and at a later date converted into a baptistery. Its superb dome of mosaic, which imparts to the interior a mysterious solemnity, and its three matchless doors, two of which were pronounced by Michael Angelo as "worthy of being the gates of Paradise," are alone sufficient to invest this baptistery with a beauty and interest which, in our opinion, no other building of its class possesses. On the other hand, from a purely architectural point of view, the baptistery of Parma may well deserve Mr. Knight's encomium. Like the baptistery of Pisa, it was interrupted during the period of its erection, and accordingly is not uniform in style throughout. It was commenced by Benedetto Antelmi, in the year 1196, and completed in 1281. The chief interruptions were caused by Ezzelino da Romana, who, about the middle of the thirteenth century, governed the north of Italy, and who, out of revenge towards the inhabitants of Parma, who had seriously offended him, forbade a further supply of marble from the quarries in the Veronese territory. The baptistery, which had so far been constructed of this marble, was completely stopped during his dominion. The result of this delay is that the lower portion is in the Romanesque style of the latter part of the twelfth century, whilst the upper portions, including the internal dome, are in the Gothic of the thirteenth century. The difference of style, both externally and internally, is happily blended by the intermediate stages, formed of detached shafts carrying horizontal lintels. And, externally, the angle pilasters rise without any interruption from the lower Romanesque work, and are terminated with Gothic capitals, at the upper arcade, in the most consistent manner. In the design, therefore, one does not observe the want of rhythm between the parts so noticeable on the exterior of the Pisan example.

It will be seen, on reference to the accompanying plan, Fig. 20, that the building is octagonal externally, and sixteen-sided internally. Of the sixteen sides, eight are rather larger than the others; the larger ones are parallel to the faces of the exterior, the lesser ones alternating with them. The baptistery is entered by three doors, placed on the north, south, and west sides. All the remaining sides of the interior have semicircular recesses, or small apses, in the lower stage. In the angles between them

are detached pillars, from the capitals of which spring round arches and slender vaulting shafts. The eastern apse contains the altar; and in the north-east recess is placed a font, quaintly carved, and supported on a lion trampling a ram. In the centre of the floor stands the great font, hewn out of a single block of marble of a light red tint. This font has an inscription which gives its date to be 1298; it is, therefore, the original one placed in the baptistery shortly after its completion. Over the lower stage are two ranges of detached shafts carrying horizontal lintels; and



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a short distance above them springs the lofty pointed dome, divided into sixteen compartments by ribs which rise from the capitals of the vaulting shafts. The baptistery is lighted by several windows, some of which pierce the dome. The interior decorations are in fresco, executed at different times between the end of the thirteenth and the latter part of the fourteenth century.

Externally the building differs materially in appearance from the baptisteries of Florence and Pisa; the walls are carried up so high as to completely enclose the dome, and carry a very low roof, which protects the dome under it from the action of the weather. The lower stage is chiefly ornamented by the three rich and deeply recessed doorways; the remaining five sides having plain round arches, spanning between the angle pilasters, and enclosing plain tympani, resting on brackets and the capitals of attached shafts. Above this stage rise four ranges of detached shafts supporting horizontal lintels, moulded at the lower edge between the capitals only. The effect of this repetition is rich but very monotonous; the slightest difference would have imparted a valuable relief. Behind



the shafts of these, as well as the two corresponding ranges in the inside, there are passage-ways, and the windows which light the interior. The upper stage is ornamented with a blind-arcade having pointed arches. Above the cornice there rise angle pinnacles, one of which, larger than the rest, surmounts the circular staircase shown in our plan. The roof cannot be seen from below, save at a great distance off. Besides being the baptistery of the city, it is also a collegiate church, with a chapter of a provost, six canons, and the attendant officers. The stalls of inlaid work were constructed in 1493, by Bernardino Canoccio.

After the important examples just described, a few words only need be added with reference to the latest baptistery on our list, that of Pistoia. The design of this building is attributed to Andrea Pisano, and it is supposed to have been erected about the year 1337. It is octagonal in plan, with a square-ended chancel. It is entered by three doors, on the north, south, and west sides. The interior is covered with an octagonal dome. The piscina is square in form, and constructed of white marble. Externally the lower stage is plain, but the upper one is decorated with a rich pointed arcade, with crocketed gablets and pinnacles. The whole terminates in an octagonal pyramidal roof. There is one feature in connexion with this baptistery which must not be overlooked; it is the external pulpit adjoining the western entrance. This is of tasteful design, executed in black and white marble. From this pulpit sermons were preached to people congregated outside the building. The whole exterior of the baptistery is faced with black and white marble in alternate layers, like so many other Italian buildings of the middle ages.

We have endeavoured, in the foregoing brief outline of the more interesting and important baptisteries in existence, to lay before the student the information necessary for a general acquaintance with this branch of early ecclesiastical architecture; and in conclusion we may direct attention to two or three other buildings, including the church of St. Maria in Cosmedin, at Ravenna, of which the earlier portion, of an octagonal form, is believed to have been constructed, in the sixth century, as an Arian baptistery. Its dome is covered with mosaics, of the same date as the fabric, which go far to prove the original destination of the building. The central space contains a representation of the Baptism in the Jordan. Round this is a zone with the twelve apostles and a throne on which is placed a cross. A baptistery of octagonal form exists at Volterra; and another attached to the cathedral of Citta Nuova, in Istria. The latter has a hexagonal piscina, which appears to have been covered with a sort of baldachin, supported on slender pillars, which rose from the angles of its low wall. D'Agincourt gives a small plan and section of this baptistery (Pl. LXIII., Figs. 13 and 14). From these we gather that three steps are carried round the walls, as in the Pisan baptistery, from which persons viewed the ceremony of baptism.

The baptistery of Siena is situated under the eastern part of the choir of the duomo. It is entered by three doors in the eastern façade.



Speaking of this baptistery, Mr. Webb remarks:—"Inside, S. Giovanni shows a central nave only two bays deep, with ailes, and a very shallow (western) apse. It is vaulted quadripartitely and domically, with Pointed arches: the transverse and longitudinal arches are boldly chamfered; the diagonal ribs present a pointed bowtell between two members: the caps are flowered, and have corbelled responds in the walls, and the bases are bold and good. There is an altar in the apse. The font, octagonal, with bronze bas-reliefs on its sides, stands before it."

The baptistery of St. Mark's, at Venice, is an oblong apartment opening from the south aisle of the nave. We are strongly of opinion that this was not the original baptistery, although it occupies a somewhat analogous position to that of St. Sophia, at Constantinople. If a detached baptistery existed, it was doubtless removed when the first ducal palace was erected where the present one now stands. The whole of the internal decorations of the present baptistery date from the fourteenth to the sixteenth century.

There is a fine Gothic baptistery, square in plan, attached to the north transept of the church of St. Giovanni, at Lucca.

We have no remains or records of any detached baptisteries in England beyond the information given us by Edmer (*Vita St. Bregwini, Ang. Sac. t. ii, p. 186*), that about the year 750, Cuthbert, archbishop of Canterbury, erected a church, eastward of his cathedral, and very close to it, to serve as a baptistery, a place of assembly, and also that the archbishops might be buried within its walls. This baptistery, according to the usual custom of the Western Church, was dedicated to St. John the Baptist. The practice of burying in baptisteries appears to have been followed in some places, previous to burial in churches being sanctioned.

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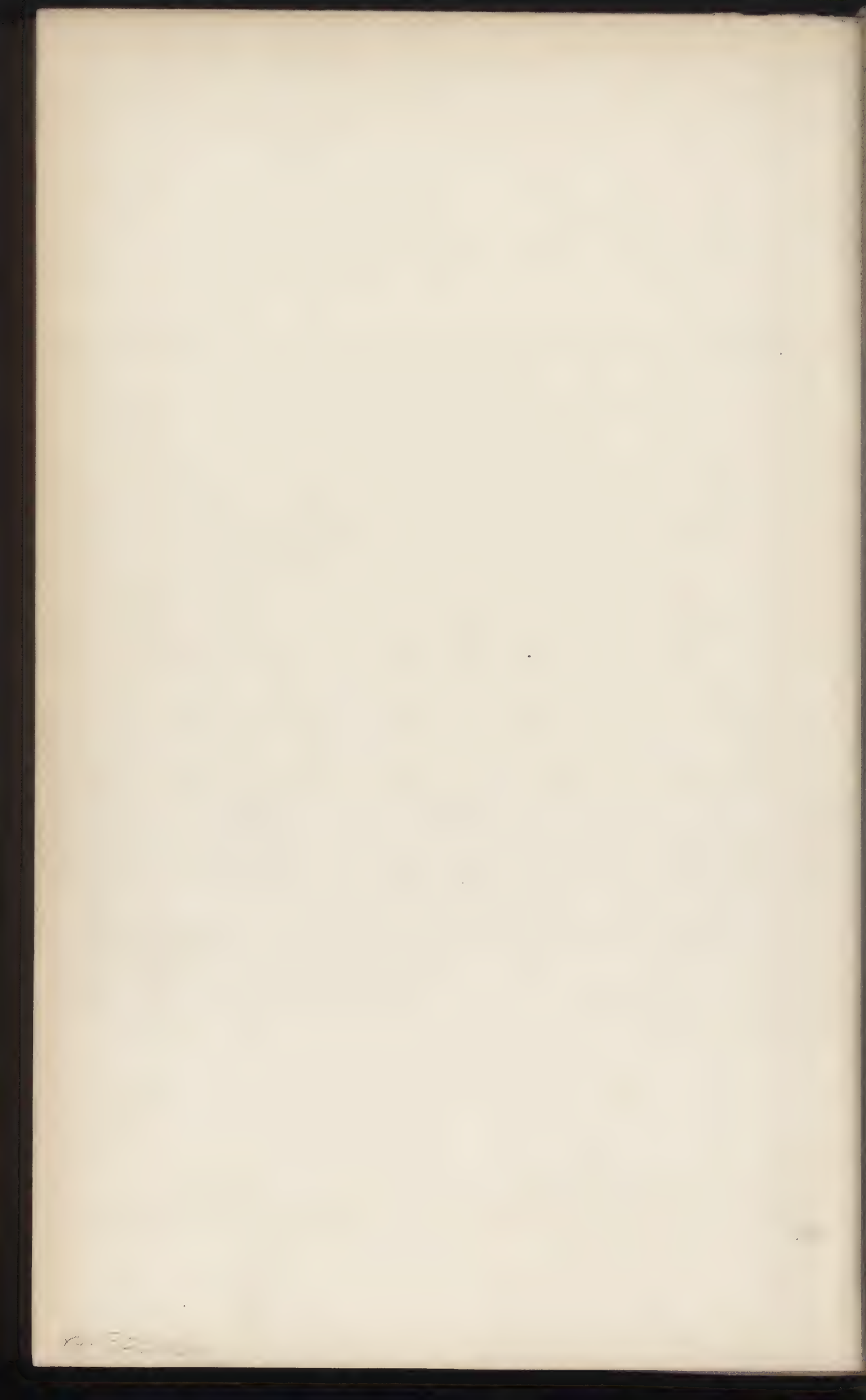
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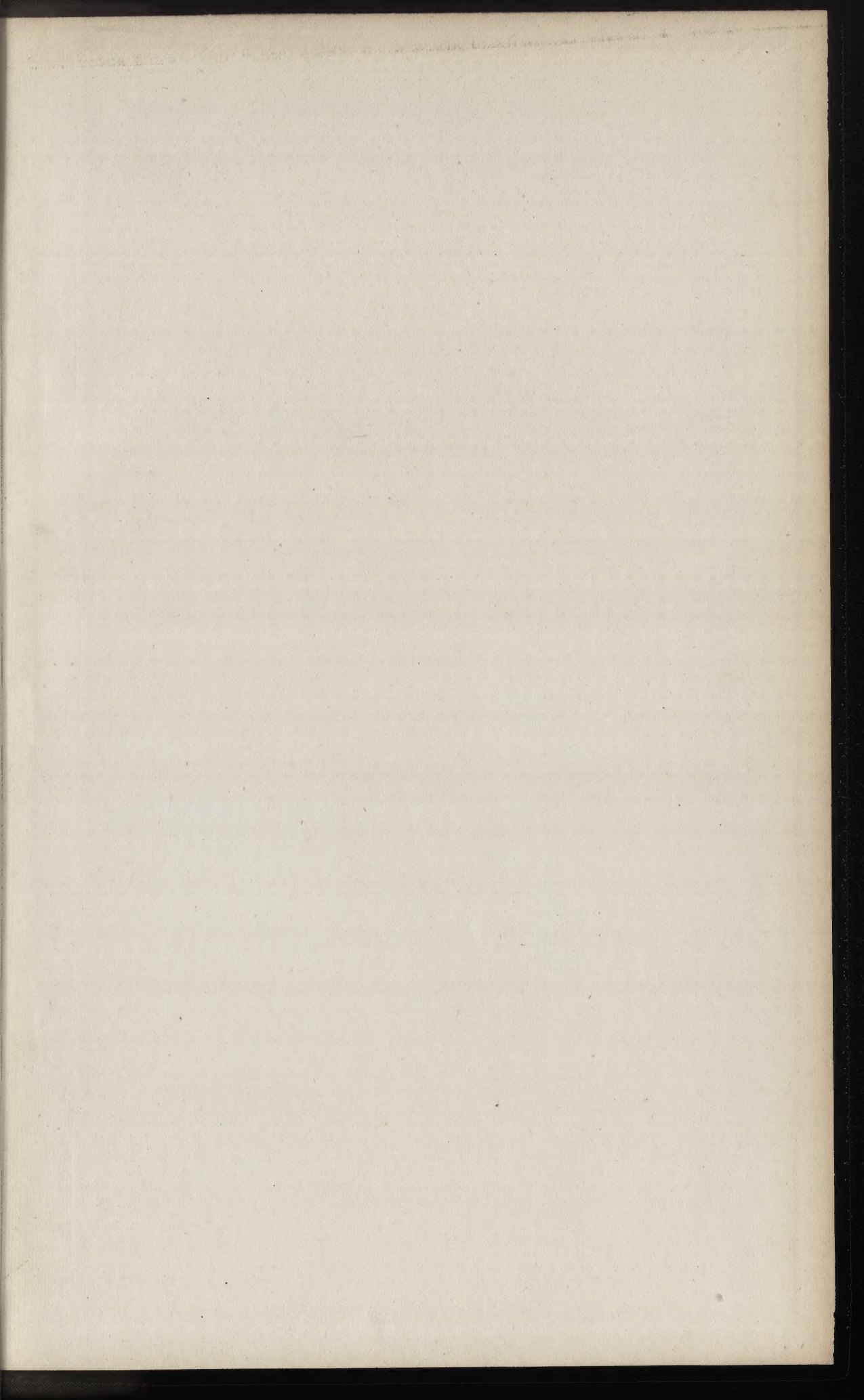


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